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METHODOLOGICAL ISSUES

GUIDELINES UNDER ARTICLES 5, 7 AND 8 OF THE KYOTO PROTOCOL

Report of a workshop on issues related to Articles 5, 7 and 8 of the Kyoto Protocol

Note by the secretariat

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I. INTRODUCTION

A. Mandate

1. At its fourth session, the Conference of the Parties (COP) adopted decision 8/CP.4 on the preparations for the first session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP). The preparatory work includes the development of guidelines for national systems under Article 5.1[1] and methodologies for the application of adjustments under Article 5.2, guidelines for the reporting of supplementary information under Article 7, with respect to both annual inventories and national communications from Annex I Parties, and guidelines for the review of implementation by expert teams under Article 8, with a view to completion by the COP at its sixth session (FCCC/CP/1998/16/Add.1).

2. At its tenth session, the Subsidiary Body for Scientific and Technological Advice (SBSTA) requested the secretariat to organize a workshop on national systems and issues relating to adjustments, referred to in Article 5, before its twelfth session (FCCC/SBSTA/1999/6, para. 34 (d)). At its eleventh session, the SBSTA requested the secretariat to include in the agenda of this workshop the consideration of the methodological and technical aspects of guidelines under Articles 7 and 8 (FCCC/SBSTA/1999/14, para. 51 (a)).

3. The SBSTA requested the secretariat to prepare documentation for consideration at the above-mentioned workshop on the experience of Annex I Parties with existing national systems for preparing greenhouse gas inventories; on preliminary options for methodologies to apply adjustments; and on an initial draft of guidelines for national systems under Article 5.1 (FCCC/SBSTA/1999/14, para. 51 (c)).

4. The SBSTA also requested the secretariat to provide a report on the workshop, a second draft of the guidelines under Article 5.1, an initial draft on modalities for adjustments under Article 5.2 and possible elements for inclusion in the guidelines under Articles 7 and 8, taking into consideration information from the workshop, for consideration by the SBSTA at its twelfth session (FCCC/SBSTA/1999/14, para. 51 (d)).

B. Scope

5. This document is intended to respond only to the request for a report on the workshop as noted in paragraph 4 above.

6. Draft guidelines under Article 5.1 are included in document FCCC/SBSTA/2000/INF.5/Add.1, while possible elements for inclusion in the guidelines under Articles 7 and 8 and methodologies for adjustments under Article 5.2 are included in document FCCC/SBSTA/2000/INF.5/Add.2. Both documents were prepared by the secretariat taking into

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[1] All articles referred to in this note are those of the Kyoto Protocol, unless otherwise specified. For the sake of brevity, the Kyoto Protocol is not mentioned after each article.

account the information from the workshop, as mandated by the SBSTA. These documents are intended to facilitate the consideration of guidelines under Articles 5, 7 and 8, as well as methodologies for adjustments under Article 5.2, by the SBSTA at its twelfth session.

II. PROCEEDINGS

7. The UNFCCC secretariat organized a workshop on issues related to Articles 5, 7 and 8 of the Kyoto Protocol in response to the mandate referred to in paragraph 2 above. The workshop was held in Bonn from 14 to 16 March 2000.

8. Sixty-nine experts and representatives from 46 Parties, four representatives from international organizations and five representatives from non-governmental organizations attended the workshop. Sixteen experts from non-Annex I Parties were funded to attend the workshop.[2]

9. The workshop was chaired by the Chairman of the SBSTA, Mr. Harald Dovland. He opened the workshop by welcoming the participants and recalling the relevant mandates given by the SBSTA. He also presented an informal report on the outcome of the workshop on compliance that had been held in Bonn from 1 to 3 March 2000.

10. The secretariat presented six working papers to facilitate discussions at the workshop. Mr. Takahiko Hiraishi, co-chair of the Intergovernmental Panel on Climate Change (IPCC) National Greenhouse Gas Inventories Programme, and Ms. Dina Kruger, co-chair of the project on good practice guidance and uncertainty management in greenhouse gas inventories, presented information on the IPCC report on this matter. Ms. Jan Corfee Morlot, Environment Directorate, Organisation for Economic Co-operation and Development (OECD), presented information related to the work of the OECD programme on Articles 5, 7 and 8 of the Kyoto Protocol.

11. Three working groups were formed to discuss the issues as follows:

(a) Working group A: Guidelines for national systems under Article 5.1;

(b) Working group B: Issues related to adjustments under Article 5.2 and to guidelines under Article 8; and

(c) Working group C: Issues related to guidelines under Article 7.

12. The Chairman requested Ms. Helen Plume (New Zealand) and Mr. Newton Paciornik (Brazil) to serve as co-chairs of working group A; Mr. Xuedu Lu (China) and Mr. James Penman (United Kingdom of Great Britain and Northern Ireland) to serve as co-chairs of working group B; and Mr. Sok Appadu (Mauritius) and Mr. Markus Nauser (Switzerland) to serve as co-chairs of working group C.

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[2] Another five experts from non-Annex I Parties were invited on a funded basis, but for various reasons were not able to attend.

13. A meeting on the capacity-building needs of Annex I Parties with economies in transition (EIT) related to implementation of guidelines under Articles 5, 7 and 8 was also organized to enable representatives of these Parties to exchange information and to consider the need for preparatory work and actions to implement the guidelines.

14. Annex III of this document lists all the papers prepared by the secretariat for the workshop.[3] A miscellaneous document with submissions from Parties on issues related to Articles 5, 7 and 8 was also made available to the participants (FCCC/SBSTA/2000/MISC.1). These submissions were used by the secretariat as a basis for preparing the working papers.

15. The conclusions of the Chairman and the three working groups are presented below (see paragraphs 16-36 and annexes I and II). A list of questions on cross-cutting issues related to Articles 6, 12 and 17 was forwarded by participants through the secretariat to the informal consultations on mechanisms held in Kuala Lumpur, 20-25 March 2000 (see paragraphs 37-39). The conclusions of the meeting on capacity-building needs of Annex I EIT Parties related to the implementation of Articles 5, 7 and 8 are also included in this report (see paragraphs 40-41).

III. CONCLUSIONS OF THE CHAIRMAN

A. General conclusions

16. The participants in the workshop agreed upon many elements to be considered for inclusion in the guidelines under Articles 7 and 8. They agreed that the conclusions of the working groups should be used by the secretariat in preparing the documents for the twelfth session of the SBSTA under the guidance of the Chairman of the SBSTA and assisted by the co-chairs of the working groups. The secretariat was asked to ensure the consistency and coherence of these documents.

17. The participants agreed to use the UNFCCC reporting guidelines on annual inventories and national communications and guidelines for the technical review of greenhouse gas (GHG) inventories of Annex I Parties, as adopted by the COP at its fifth session (FCCC/CP/1997/7), as a basis for the development of guidelines under Articles 5, 7 and 8 of the Kyoto Protocol (FCCC/SBSTA/2000/INF.5/Add.1 and Add.2).

18. The participants agreed that the early adoption of the guidelines under Articles 5, 7 and 8 would facilitate preparations for the implementation of the Kyoto Protocol by Annex I Parties.

19. The participants agreed with a proposal by the Chairman that the secretariat be invited to post the documents referred to in paragraph 4 above on its web site by approximately 15 April 2000. The Chairman suggested that participants should inform their governments that they may wish to consider these documents prior to submitting additional views on issues related to

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[3] The papers can be found on the UNFCCC web site: http://www.unfccc.int/sessions/workshop/000314/ Parties may also obtain these papers upon request.

Articles 5, 7 and 8 due to be submitted by 15 April 2000 (FCCC/SBSTA/2000/MISC.1/Add.1). He suggested that such submissions should be provided to the secretariat by 10 May 2000. This approach could facilitate the consideration of guidelines under Articles 5, 7 and 8 and methodologies for adjustments under Article 5.2 by the SBSTA at its twelfth session, including the informal consultations of the pre-sessional week.

B. Conclusions on guidelines for national systems under Article 5.1 by working group A

20. The participants agreed that the initial draft of the guidelines for national systems under Article 5.1 contained in working paper 2 constitutes a good starting point for further consideration. They agreed upon a revised draft of guidelines for national systems, noting the need for editing, minor structural changes and a review for consistency and compatibility with other guidelines.

21. The participants agreed that early adoption of these guidelines would facilitate the introduction of national systems required under Article 5.1 in a timely manner. They also agreed that early testing of the guidelines would facilitate their refinement before the first commitment period.

C. Conclusions on issues related to adjustments under Article 5.2 and on guidelines under Article 8 by working group B[4]

22. General approach. There should be a single review process that shall encompass commitments under the Protocol and should also encompass Convention commitments not covered by Kyoto Protocol commitments. A country which is party to the Convention, but not the Protocol would still have a review under the Convention. For this reason, guidelines under the Convention should be maintained once guidelines under the Protocol have been developed.

All final reports of the expert review process are to be sent to the compliance procedure.

23. Elements to be reviewed and associated timing:

(a) Before the first commitment period

The following elements should be reviewed for the purpose of the implementation of the Protocol prior to the first commitment period:

- Base year emission inventory (as defined under Article 3.7);

- National systems as defined in guidelines under Article 5.1;

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[4] Section C of this document is the original report as produced during the workshop. No formal formatting has been performed.

- National registry systems (to be defined by the mechanisms group);[5] and

- National communication.

There was a general view that base year emission inventories should be reviewed prior to the first commitment period, after which they would be fixed for the duration of the commitment period. The point was, however, raised that there could be certain circumstances where recalculations of base year inventories may be necessary during the commitment period. It was noted that the first annual inventory (including the inventory report) to be reported under the Protocol is for the year 2008. Review of the inventory prior to the first commitment period could therefore only occur under the auspices of the Convention, although the process of technical reviews of inventories under the Convention could be used as a trial under the guidelines for review under Article 8 of the Protocol.

(b) For the years covered by the commitment period

As part of the annual review:

Annual reporting under Article 7.1, including:

- annual inventory and

- supplementary information relating to transfers and acquisitions under the mechanisms.

All data should be considered as part of the annual review, but the extent to which the data needs to be reviewed in-depth may depend on the frequency with which the data is updated or if changes occur in the underlying national system/registry.

As part of the periodic review:

- National communication;

- National systems as defined in guidelines under Article 5.1;

- National registry systems (to be defined by the mechanisms group);[6] and

- Any other supplementary information under Article 7.2.

To the extent that is necessary, the aspects of national systems under Article 5.1 or national registries could be reviewed more frequently (e.g. annually).

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[5] National systems under Article 5.1 and national registry systems should be reviewed at the same time.

[6] National registry systems could be part of guidelines under Article 5.1.

(c) After the commitment period

Issue: A comparison of assigned amounts versus cumulative emissions was regarded as a cross-cutting issue with links into the compliance process (and potentially for the mechanisms).

24. Guidance. The guidance under Article 8 should take account of national circumstances and contain guidance related to:

(a) Annual review:

(i) review of annual inventories;[7]
(ii) identification of inventory "problems"; and
(iii) review of supplementary information relating to transfers and acquisitions under the mechanisms.

The guidance to be provided to review teams on how to identify problems should take into account the outcome of current work on IPCC good practice guidance, in particular noting the analysis of key source categories, time-series analysis and outlier detection.

The trial period of inventory review under the Convention will also allow for the elaboration of problem-finding approaches.

Parties may wish to consider any expedited procedures for review linked to mechanisms eligibility.

The classification of any inventory related problems found under the annual review is an exercise which needs to take place in discussion with the compliance group. Annex II below provides a technical approach to classifying inventory problems as well as questions to be addressed by the Joint Working Group on Compliance.

(b) Periodic review of:

(i) national communications;
(ii) national systems under Article 5.1;
(iii) national registry systems; and
(iv) any other supplementary information under Article 7.2.

Such guidance may be used prior to, during or after the commitment period.

25. Process of annual review: The following elements relate to the process of problem consideration:

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[7] Parties should consider whether this should be elaborated after the trial period of the technical review process under the Convention.

(a) The review process should be completed within one year;

(b) If a problem is found, there is a fixed deadline for the Party to correct it;

(c) The annual review is in several stages, but some of these may be in parallel (e.g. initial checks and synthesis and assessment, review of annual inventories and review of supplementary information related to transfers and acquisitions under the mechanisms);

(d) Once reviewed the information would be included as part of the annual compilation and accounting conducted by the secretariat in accordance with Article 8;

(e) During the review questions will be raised;

(f) Expert review team members should have the necessary technical expertise, including knowledge of IPCC good practices;

(g) Expert review teams (and the secretariat) should follow guidance to distinguish between different types of problems;

(h) If a Party corrects the problem in accordance with IPCC Guidelines and good practice, this does not constitute an adjustment;

(i) Prior to being reviewed, a Party may request assistance from the compliance body or bodies. (This is subject to negotiations in the compliance procedures.) In this case the review process proceeds as normal, but the report of the expert review team should reflect what assistance has been provided to the Party;

(j) Where a problem is found or at any stage in the review process, Parties may be provided with access to technical advice from the review team or other Parties and/or may request technical or financial assistance as facilitation from the compliance procedure;

(k) If the review team considers that further action is required after the above steps are taken then the question should be considered as "an identified question";

(l) The annual review should be separate from the national communication review and by different review teams;

(m) The annual review process will generally be conducted on a central basis, that is, it will not involve country visits on an annual basis. Country visits could also occur if required in particular circumstances (guidance may be required on these circumstances) and with the consent of the Party concerned;

(n) Each Annex I Party would be subject to at least one in-country review during the commitment period, preferably in conjunction with the country visit under the national communication review; and

(o) Outside experts may be involved in the review process, providing inputs to the review team. Their role should be limited to assisting the review team and secretariat, in particular with those tasks that do not involve subjective judgements, and they should not have responsibility for the content of the review report. They should not be involved as part of the review of an individual country, at any stage, without the agreement of the Party concerned. Such experts should work under the guidance of the expert review team. They may be involved in the review of activity data. Outside experts should be selected according to agreed criteria.

Issue: What should be the composition of the expert review team and what should be done to ensure that they have expertise?

26. Process of adjustment calculation. The following elements were considered:

(a) The process of adjustment could begin before the first commitment period for the base year;

(b) The process of adjustment would begin after a Party has had the opportunity to correct a problem and would include the following elements;

(c) The review team draft report is sent to the Party for comment;

(d) The review team recommends if an adjustment is appropriate taking into account any guidance related to the type of problem. This recommendation is included in the report together with methodological advice on the type of problem, based on the guidance contained within the Article 8 guidelines;

(e) Two possible options were considered:

(i) Option A:

An adjustment may be initiated by a Party or result from the recommendation of a review team.

Adjustments are calculated by individual Parties.

Review teams decide whether to accept or reject adjustments.

(ii) Option B:

The review team / adjustment team (under the auspices of the review team) would:

- calculate the adjustment;
- recommend the application of the adjustment to the Party.

The Party would decide whether to accept the application of the adjustment;

(f) If the Party disagrees with the review team's recommendation, this is notified to the compliance procedure/body/bodies;

(g) The expert review team is responsible for a final assessment report including, where relevant, whether the adjustment was accepted by the Party and also reports on the choice of methodologies, rationale and the outcome of the adjustment (N.B. In subsequent reporting the Parties should report what measures it has taken to resolve the problems which led to an adjustment); and

(h) The following issue needs further discussion: If a Party applies/accepts an adjustment, but later is able to provide retroactively a revised estimate during the commitment period, the adjustment could be removed, subject to the approval of the review team and compliance procedures (There could be guidance on limitations on such recalculations or the provision of estimates for missing estimates in the inventory).

(N.B. Adjustments could either be reported to the secretariat to include in its database or they could be reported as supplementary information under Article 7.)

Issue: Can adjustment procedures begin after initial checks if this step does not involve a review team?

27. The review of national communications including the information reported under Article 7.2. The following elements were considered:

(a) The guidelines should contain sections including purposes, tasks, approaches and procedures;

(b) The guidelines should describe the tasks to be reviewed at each stage of the review process;

(c) The national communication should be reviewed separately from the annual review and by different review teams;

(d) The review process should be completed within one year; and

(e) Review should occur once for each national communication.

(N.B. In general, the group noted that the work on the guidelines should reflect the priorities of the Parties and that until many issues are resolved in relation to mechanisms and land-use, land-use change and forestry it may not be possible to develop the above aspects of these guidelines by COP 6.)

28. Methods to apply adjustment. The SBSTA at its eleventh session considered that adjustments referred to in Article 5.2 of the Kyoto Protocol should only be applied when inventory data submitted by Parties are incomplete and/or are calculated in a way that is not consistent with the IPCC 1996 Revised Guidelines as elaborated by any good practice agreed upon by the COP.

In this context:

- Adjustments are not intended as substitute for Parties' responsibility to provide national emission estimates in accordance with the relevant decision of the COP;
- Adjustments should be conservative; and
- Conservative adjustments are intended to provide an estimate of the amount of emissions from a given category, in a manner that protects all other Parties that submitted complete, verifiable inventories in line with relevant decisions made by the COP. Conservative adjustments are also intended to provide an incentive for Parties to provide annual inventories consistent with relevant decisions of the COP. Accordingly, the conservative adjustment for emissions would be downward biased when applied to the baseline year and upward biased when applied to all other years (and vice versa for sequestration).

When adjusting commitment period estimates, consideration should be given to the implications on the base year emissions and consistency of trends. This issue may require further work.

The technical experts recommended that guidance on adjusted estimates should be developed taking into account source category and gas, types of problems (e.g. missing estimate, poor emission factor), and/or data availability. As far as possible, this guidance would consist of a hierarchy of approaches so as to guide the decisions on a specific case. It would also include guidance on the required documentation of the approach taken and assumptions made by the body calculating the adjustments. Calculating adjustments requires technical expertise.

The implications of developing and implementing this guidance would be:

That further technical work would be required to develop the methods;
That the comparative accuracy of the methods for calculating adjustments should be considered; and
That linkages to the adjustment process would be considered.

The technical experts felt that the adjustments would be a last resort in the process and noted that it would not be necessary or feasible to develop detailed guidance on every possible situation.

The experts had in front of them a paper considering the following methods to apply adjustments: IPCC tier I methods, Annex B averages, extrapolation using drivers, extrapolation without using drivers, interpolation, and linkages (see also Working paper No. 4 (2000), para. 43). The experts felt that the methods provided in that paper represent a good start. The outcome of the future work may add, subtract or modify these methods. With respect to these methods, it is important to consider national circumstances.

The group felt that the work on technical guidance could start at any time. It should ideally take into account the experience gained in the trial period on review, and would likely be finalized after completion of the trial period. By COP 6, the Parties could take a decision on the aim and scope of any further methodological work. Parties should be requested to provide views on the timing of work in their next submission.

On the question how estimates could be made conservative, the group felt that the preferred option would be to generate estimates based on conservative assumptions. The details of this approach would need to be considered when developing the guidance. In general, the use if inflators or deflators is less attractive but their use may be considered in certain circumstances.

29. Article 5.2. In relation to this article, the group noted that the reference in Article 5.1 to methodologies in Article 5.2 is understood to refer to methodologies accepted by the IPCC for the estimation of GHG emissions and removals by sinks. In contrast, the second reference in Article 5.2 to methodologies is understood to refer to methodologies for adjustments and would be elaborated under Article 5.2 or be included in guidelines under Article 8.

D. Conclusions on issues related to the elements of the guidelines under Article 7 by working group C

30. The participants identified elements to be considered for inclusion in the guidelines under Article 7, as listed in annex II to this document, and the timing of submissions associated with these elements.

31. The participants agreed that the UNFCCC reporting guidelines on annual inventories and national communications, as adopted by the COP at its fifth session (FCCC/CP/1999/7), should be used as the basis for the development of guidelines under Article 7. They noted, however, that Annex I Parties do not as yet have experience with these guidelines, which will be used for the first time for the national inventory submissions due by 15 April 2000 and the third national communications due by 30 November 2001.

32. The participants agreed that reporting of information related to Article 7 should include supplementary information:

(a) To demonstrate progress by 2005, in accordance with Article 3.2;

(b) On steps taken by Annex I Parties in working through the International Civil Aviation Organization and the International Maritime Organization to limit or reduce emissions from aviation and marine bunker fuels, in accordance with Article 2.2;

(c) To determine the achievement of individual targets of Annex B Parties in accordance with Article 3.1; and

(d) On transfers of parts of the assigned amount to future commitment periods.

33. The participants also agreed on the need for supplementary information on:

(a) All sources, sinks, sectors and gases;[8]

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[8] During the final plenary of the workshop it was agreed to replace the reference to "land-use, land-use change and forestry" with "all sources, sinks, sectors and gases". The secretariat considers that supplementary information either from all sources, sinks and gases or from land-use, land-use change and forestry will not be needed, because all relevant information should be included in the annual inventory submission. The secretariat suggests using the phrase, "Information on Article 3.3, 3.4 and other relevant provisions of the Protocol" instead of either of the above-mentioned terms, considering the possibility that all relevant information on Article 3.3, 3.4 and other provisions of the Kyoto Protocol may not be covered by the annual reporting of the inventories.

(b) Transfers and acquisitions in accordance with Articles 6, 12 and 17;

(c) Adverse impacts in accordance with Articles 2.3 and 3.14 ; and

(d) National systems and the treatment of adjustments under Article 5.2.

34. The participants noted, however, that the information in relation to the elements in paragraph 33 above will be incorporated into the guidelines under Article 7 taking into consideration the outcome of relevant working groups (working group on mechanisms, working group on Article 4.8 and 4.9 of the Convention, working group on adjustments, Joint Working Group on Compliance). Furthermore, the supplementary information on land-use, land-use change and forestry will need to be incorporated after the IPCC has finalized its Special Report on Land-use, Land-use Change and Forestry and the COP has adopted decisions on this issue. Provision of this information will be contingent on future COP decisions, taking into account the methodological work of the IPCC.

35. The participants also concluded that supplementary information in relation to the definition of base years for Annex I Parties with economies in transition and the definition of base years for hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6) may not need to be included in the guidelines under Article 7, but may need to be addressed elsewhere. They also noted that there might be a need for the COP to adopt decisions on the reporting of actual emissions of HFCs, PFCs and SF_6 by all Annex I Parties.

36. The participants noted that the provisions of Article 7.3 related to the timing of the first submissions in accordance with Article 7.1 and 7.2, have potential implications for submitting supplementary information prior to the beginning of the first commitment period. They indicated that, if Annex I Parties are to provide such information prior to beginning of the first commitment period, appropriate COP decisions might need to be adopted.

E. Questions addressed to the informal consultations on mechanisms held in Kuala Lumpur, 20-25 March 2000

37. Participants in different working groups asked several questions concerning possible linkages between guidelines under Articles 5, 7 and 8 and modalities, rules and guidelines to be drawn up for mechanisms under Articles 6, 12 and 17.

38. With reference to national systems under Article 5.1, participants in the workshop suggested that the mechanisms consultations consider the following questions:

(a) Will national registries be part of the national systems under Article 5.1?

(b) If not, what would be the relationship between national registries and national systems?

39. With reference to Articles 5.2 and 8, participants in the workshop suggested that the mechanisms consultations consider the following questions:

(a) What is a definition of a national registry system for reference in the guidelines on review?

(b) Does the work of the mechanisms group suggest the need for the review prior to the first commitment period to focus on particular items, noting that the review of national communications and annual inventories using the Article 8 guidelines may only be possible on a trial basis?

(c) Should the review of transfers and acquisitions of assigned amount units (AAUs), certified emission reductions (CERs) and emission reduction units (ERUs) focus on an aggregation of eligible transfers and acquisitions?

(d) Should the secretariat be expected to maintain a database to record assigned amounts, transfers and acquisitions, and if so, should this be integrated with a database on inventories of emissions from sources and removals by sinks, based on annual submissions from Parties?

(e) Should expedited procedures for review related to mechanisms and compliance exist and, if so, should they be incorporated into the Article 8 review guidelines or under compliance procedures?

(f) Should any aspects of the mechanisms be reviewed under Article 8?

F. Conclusions of the meeting on capacity-building needs of Annex I EIT Parties related to the implementation of Articles 5, 7 and 8

40. The participants in the meeting agreed that support is urgently needed to maintain the existing capacity of Annex I EIT Parties to address climate change and to ensure the effective participation of these countries in the meetings and workshops organized by the secretariat, including the subsidiary body meetings. Participants agreed that the countries of the EIT group are at different stages of market and institutional reform and their needs for capacity-building are different. They noted that it is important that capacity-building is tailored to meet the specific needs and priorities of these countries.

41. Participants agreed that capacity-building is very important for the effective participation of the EIT countries in the Convention and the Kyoto Protocol processes. They supported the draft proposal for national inventory systems in countries with economies in transition, elaborated by the United Nations Institute for Training and Research (UNITAR).[9] Participants decided to provide feedback to UNITAR on the draft proposal by mid-April 2000, taking into consideration the specific needs likely to emerge from implementing the guidelines on Articles 5, 7 and 8 at national level. UNITAR will update the proposal accordingly.

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[9] The proposal can be found on the web site of UNITAR: www.unitar.org/cctrain/eit

Annex I

CLASSIFICATION OF ANNUAL INVENTORY PROBLEMS[1]

The following classification of different types of problems is based on a technical approach and is intended for input and discussion with the compliance group.

If the review team finds problems, these may fall under the following headings:

- *De minimis*;[2]
- Other problems.

Quantifiable problems in the "other" category may be subdivided into "first order" (more significant) and "second order" problems:

First order problems may include the following:

- Failure to submit an inventory in a given time-frame;
- Failure to include in the inventory a source which accounts for more than 10 per cent of the most recent inventory;
- Suspected fraud or clear misrepresentation in the report;
- Adjustments account for more than 5 per cent of the annual inventory;
- Recurring problems, such that the difference between the submitted inventory and the adjusted inventory exceeds 30 per cent in a given year or as a sum of differences in the commitment period;
- Any key sources are missing; and
- The activity data is not reliable in a key source category.

Issue: How does categorization of problems affect next steps within the review process?
Issue: What happens to first order problems?
Issue: What sort of problems should be subject to adjustment?
Issue: Are some problems so serious they should not be subject to adjustment even though technically feasible?

Criteria for application of adjustments could depend upon the methodology chosen for adjustments.

The guidance to be provided to review teams on how to find problems should take into account the outcome of current work on IPCC good practice guidance, in particular noting analysis of key source categories, tiers, time-series analysis and outlier detection.

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[1] This annex and annex II below are part of the original report as produced during the workshop. No formal formatting has been performed.

[2] Insofar as methodological criteria can be used to identify *de minimis* problems as required by the compliance group.

The trial period of inventory review under the Convention will allow for the elaboration of problem finding.

Procedural problems may include the following:

- Documentation not transparent;
- Insufficient archiving;
- National systems not in accordance with Article 5.1 guidelines;
- Problems with quality assurance/control;
- Failure to submit on time;
- Data not reported in the correct format;
- Inconsistency between information in the common reporting format and the national inventory report; and
- National registry systems not in accordance with guidelines.

The guidelines under Article 5.1 should inform the development of mandatory elements in reporting under Article 7.1[3] and this could be linked to determination of whether a problem is *de minimis*, first or second order.

The group noted that resolving non-quantifiable problems could help to resolve quantifiable problems.

Questions to be addressed by the Joint Working Group on Compliance:

How should any classification approach for inventory-related problems found during the annual review be developed? Should guidance under Article 8 contain any aspects of a classification for the type of problem found? It is important to have a combined discussion of these points with the compliance group.

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[3] Taking into account any good practices agreed by the COP.

Annex II

ELEMENTS TO BE CONSIDERED FOR INCLUSION IN GUIDELINES UNDER ARTICLE 7

A) Supplementary information under Article 7.1

- Information on adjustments under Article 5.2 subsequent to application of adjustments

Before the first commitment period

- Information on all sources, sinks, sectors and gases;[4, 5]
- Total annual acquisitions of CERs in accordance with Article 12;[6]
- National systems.[7]

During the first commitment period

- Information on all sources, sinks, sectors and gases;[4, 5]
- Total annual transfers and acquisitions of ERUs, AAUs and CERs in accordance with Articles 6,12 and 17;[6]
- National systems.[7]

After the first commitment period[8]

- Information on all sources, sinks, sectors and gases;[4, 5]
- Total annual transfers and acquisitions of ERUs, AAUs and CERs in accordance with Articles 6, 12 and 17;[6]
- National systems.[7]

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[4] The supplementary information on land-use, land-use change and forestry will need to be incorporated after the IPCC has finalized its Special Report and the COP has adopted relevant decisions on this issue. Provision of this information will be contingent on future COP decisions, taking into account methodological work of the IPCC.

[5] See footnote 8 on page 13.

[6] The information to be reported in relation to the Kyoto Protocol mechanisms would be incorporated following the outcome of the working group on mechanisms and once the COP has adopted decisions on Articles 6, 12 and 17, including national registries.

[7] It may be necessary to report on some elements of national systems on an annual basis as part of the inventory reporting. This applies to any reference to national systems in this annex.

[8] Information related to the work of the Joint Working Group on Compliance may need to be incorporated as soon as the COP has taken appropriate decisions.

B) Supplementary information under Article 7.2

Before the first commitment period

- Information on demonstrable progress (Article 3.2), in addition to that required under the UNFCCC reporting guidelines, could include:
  - Implementation of national systems;
  - Preparation for the implementation of national registries and use of the Kyoto Protocol mechanisms; and
  - Fixing the base year.
- Information on the implementation of joint fulfilment of commitments (Article 4);[9]
- Total acquisitions of CERs in accordance with Article 12[6] for the period up to the year of submission;
- National systems;
- Adverse impacts (Articles 2.3 and 3.14);[10]
- Article 2.1 and 2.2.[11]

During the first commitment period

- Information on the implementation of joint fulfilment of commitments (Article 4);[9]
- Total transfers and acquisitions of ERUs, AAUs and CERs in accordance with Articles 6, 12 and 17 for the period up to the year of submission;
- National systems;
- Adverse impacts (Articles 2.3 and 3.14);[10]
- Article 2.1 and 2.2.[11]

After the first commitment period

- Information on the implementation of joint fulfilment of commitments (Article 4);[9]
- Total transfers and acquisitions of ERUs, AAUs and CERs in accordance with Articles 6, 12 and 17 for the period up to the year of submission;
- National systems;
- Adverse impacts (Articles 2.3 and 3.14);[10]
- Article 2.1 and 2.2.[11]

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[9] The need for further information related to the implementation of joint fulfilment of commitments, in the interest of transparency, has to be assessed.

[10] Any information to be reported in relation to Articles 2.3 and 3.14 would be incorporated following the outcome of workshops and ongoing discussions and/or relevant decisions of the Convention bodies.

[11] What supplementary information, if any, to be reported will need to be assessed, noting, *inter alia*, that Parties do not yet have experience with the present UNFCCC reporting guidelines.

Supplementary information under Article 7.1 and/or 7.2

After the first commitment period

- Achievement of individual targets of Annex B Parties as follows:[12]

  1. Aggregate GHG emissions in base year(s), including emissions from land-use change in 1990 if land-use change and forestry constituted a net source of greenhouse gas emissions in 1990 (Article 3.7);
  2. +/- emissions/ removals from afforestation, reforestation and deforestation (ARD (Article 3.3);
  3. +/- emissions/ removals from additional human-induced activities in the agricultural soils and the land-use change and forestry categories if a future COP/MOP decides to include such activities in the accounting of assigned amounts and if a Party chooses to apply such a decision for its first commitment period, consistent with the final sentence of Article 3.4;
  4. +/- total emission reduction units acquired from or transferred to another Party until the last year of the commitment period (Article 6);
  5. +/- any parts of assigned amount acquired from or transferred to another Party until the last year of the commitment period (Article 17);
  6. + total certified emission reductions acquired until the last year of the commitment period (Article 12);
  7. Quantified emission limitation and reduction commitment as a percentage of base year emission;
  8. Information on adjustments applied, if any.

- Transfer of parts of the assigned amount to future commitment periods.

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[12] Some additional information related to the implementation of Articles 6, 12 and 17 may need to be incorporated subject to further COP decisions.

Annex III

LIST OF DOCUMENTATION PREPARED BY THE SECRETARIAT FOR THE WORKSHOP

Working paper No.1[13]	Experience with existing national systems for preparing GHG national inventories
Working paper No.2	Draft guidelines for national systems under Article 5.1 of the Kyoto Protocol
Working paper No.3	Preliminary options for methodologies to apply adjustments under Article 5.2 of the Kyoto Protocol.
Working paper No.4	Methodological issues related to guidelines under Article 8 and adjustments under Article 5.2 of the Kyoto Protocol: summary of issues
Working paper No.5	Methodological issues related to guidelines under Article 7 of the Kyoto Protocol: summary of issues
Working paper No.6	Effects of recalculations of GHG inventories on assigned amounts and on emission limitation and reduction commitments of Annex I Parties
The following papers on "Preliminary options for methodologies to apply adjustments under Article 5.2 of the Kyoto Protocol" were prepared by consultants commissioned by the secretariat:	
Working paper No. 3 (a)	Fuel combustion activities: Sectoral breakdown of emissions based on international energy data
Working paper No. 3 (b)	Fuel combustion activities: Breakdown of aggregated fuel data, estimating CO_2 emissions from per capita emissions, CH_4 and N_2O emissions from fuel combustion
Working paper No. 3 (c)	Fuel combustion activities: Interpolation, extrapolation and approximation using drivers
Working paper No. 3 (d)	Fugitive emissions from fuels
Working paper No. 3 (e)[14]	Industrial processes
Working paper No. 3 (f)	Agriculture
Working paper No. 3 (g)	Waste

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[13] This paper was only presented orally at the workshop. The final version of this paper was published as document FCCC/SBSTA/2000/INF.3.

[14] This paper was not presented at the workshop. It is now available on the UNFCCC web site (www.unfccc.int/sessions/workshop/000314/).

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METHODOLOGICAL ISSUES

GUIDELINES UNDER ARTICLES 5, 7 AND 8 OF THE KYOTO PROTOCOL

Report of a workshop on issues related to Articles 5, 7 and 8 of the Kyoto Protocol

Addendum

SECOND DRAFT OF THE GUIDELINES FOR NATIONAL SYSTEMS UNDER ARTICLE 5.1 OF THE KYOTO PROTOCOL

Note by the secretariat

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Annex

Second draft of the guidelines for national systems for the estimation of anthropogenic greenhouse gas emissions by sources and removals by sinks under Article 5.1 of the Kyoto Protocol

GE.00-61425

I. INTRODUCTION

A. Mandate

1. The Kyoto Protocol states in Article 5.1 that each Party included in Annex I shall have in place, no later than one year prior to the start of the first commitment period, a national system for the estimation of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol. Guidelines for such national systems [...] shall be decided upon by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP) at its first session.

2. The Conference of the Parties (COP), by its decision 8/CP.4, decided to prepare guidelines for national systems under Article 5.1 with a view to completion by COP 6 (FCCC/CP/1998/16/Add.1), with the purpose of recommending their adoption by the COP/MOP at its first session.

3. The Subsidiary Body for Scientific and Technological Advice (SBSTA), at its tenth session, requested the secretariat to organize a workshop on national systems and issues relating to adjustments, referred to in Article 5 of the Kyoto Protocol, before its twelfth session (FCCC/SBSTA/1999/6, para. 34 (d)). The SBSTA, at its eleventh session, requested the secretariat to prepare documentation for consideration at the above-mentioned workshop, including an initial draft of guidelines for national systems under Article 5.1 of the Kyoto Protocol (FCCC/SBSTA/1999/14, para. 51 (c)). The SBSTA also requested the secretariat to provide a report on the workshop and a second draft of the guidelines under Article 5.1, taking into consideration information from the workshop, for consideration by the SBSTA at its twelfth session.

4. Also at its eleventh session, the SBSTA took note of the information provided by Parties related to Article 5 of the Kyoto Protocol (FCCC/SBSTA/1999/MISC.9 and Add.1). It agreed to consider the basic elements of national systems listed in annex I to the report of the SBSTA on its eleventh session as a basis for further work (FCCC/SBSTA/1999/14, para. 51 (g)).

5. The SBSTA took note of the information provided by a representative of the Intergovernmental Panel on Climate Change (IPCC) on its ongoing work related to good practice in national inventory preparation, including managing uncertainty. It noted that the application of good practices in the use of the IPCC 1996 Revised Guidelines for National Greenhouse Gas inventories may improve the quality of such inventories and that some elements of good practices may also be considered for the preparation of guidelines under Articles 5, 7 and 8 of the Protocol. The SBSTA noted that a report on these issues will be provided by the IPCC for consideration at its twelfth session (FCCC/SBSTA/1999/14, para. 51 (h)).[1]

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[1] A draft of the IPCC document entitled: "Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories" was sent by the IPCC to countries for a joint expert-government review on 17 December 1999. It is expected that the sixteenth session of the IPCC, to be held from 1 to 8 May 2000, will complete a final version of the guidance.

B. Scope of the note

6. As requested, the secretariat organized a workshop on issues related to Articles 5, 7 and 8 of the Kyoto Protocol, which was held in Bonn, from 14 to 16 March 2000. A preliminary version of the guidelines for national systems for the estimation of anthropogenic greenhouse gas emissions by sources and removals by sinks under Article 5.1 of the Kyoto Protocol, referred to below as guidelines for national systems, was made available at the workshop as working paper No.2. The report on this workshop is contained in document FCCC/SBSTA/2000/INF.5.

7. In response to the mandate of the SBSTA, this note contains draft guidelines for national systems (see annex). The guidelines are based on: (a) the basic elements of national systems agreed upon by Parties at SBSTA 11; (b) the draft of the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories, referred to below as the IPCC good practice guidance;[2] (c) notes by the secretariat on the experience of Parties with existing national systems used by Parties to prepare national greenhouse gas (GHG) inventories;[3] and (d) views from Parties on national systems, adjustments and guidelines under Articles 5, 7 and 8 of the Kyoto Protocol, contained in documents FCCC/SBSTA/1999/MISC.9 and Add.1 and FCCC/SBSTA/2000/MISC.1. The guidelines have been modified by taking into consideration the conclusions of the workshop mentioned in paragraph 3 above. They have undergone editing and minor structural changes and have been reviewed for consistency by the secretariat under the guidance of the co-chairs of the working group[4] responsible for this topic at the workshop.

8. The secretariat hopes that this note will facilitate the consideration of the guidelines for national systems by the SBSTA at its twelfth session. It could serve as the starting point for considering the guidelines for national systems that are expected to be completed by the sixth session of the COP, as requested by decision 8/CP.4. It is anticipated that the guidelines for national systems will be revised after the twelfth session of the SBSTA, as needed, and made available to Parties for consideration by the SBSTA at its thirteenth session.

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[2] The definitions used in these draft guidelines for national systems which originate from the IPCC good practice guidance will be updated once the IPCC good practice guidance is completed. Also any substantive change resulting from the process of approval of the report by the IPCC will be properly reflected in further versions of the draft guidelines for national systems.

[3] See document FCCC/SBSTA/2000/INF.3 "Experience of Annex I Parties with existing national systems for preparing greenhouse gas inventories". See also the report of the secretariat FCCC/SBSTA/1999/INF.1: "Report on the workshop on the new UNFCCC reporting guidelines on annual inventories and options to address challenges facing Annex I Parties with economies in transition in preparing greenhouse gas inventories".

[4] Ms. Helen Plume, (New Zealand) and Mr. Newton Paciornik (Brazil).

C. Possible action by the SBSTA

9. The SBSTA may wish to consider the information in this note and to endorse or modify the main elements of the guidelines for national systems. The SBSTA may also wish to consider how the relationship between issues pertaining to Article 5.1 and other provisions of the Kyoto Protocol should be reflected in the guidelines for national systems.

10. The SBSTA may wish to provide guidance related to preparations for its thirteenth session, if further modifications to the guidelines for national systems are warranted, and to a draft decision for consideration by the COP at its sixth session, as appropriate.

D. Approach

11. The draft guidelines for national systems were prepared to clearly differentiate between the mandatory and desirable functions of national systems. This is intended to identify the obligations of Parties under Article 5.1 of the Kyoto Protocol, particularly for the first commitment period.

12. The draft guidelines for national systems were prepared in a function-oriented way to ensure the quality and reliability of the estimation of the GHG emissions by sources and removals by sinks to be performed by different national systems. The starting premises were:

(a) That national circumstances resulting from the existing differences in institutional structure and organization, as well as approaches to preparing national GHG inventories, should not negatively affect the performance of the functions by the national systems; and

(b) That these functions should, at least, ensure an adequate level of quality in the estimation of GHG emissions by sources and removals by sinks.

13. The draft guidelines for national systems are built in part on the guidelines adopted under the Convention, namely the guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories, and the guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention (FCCC/CP/1999/7). The secretariat assumes that these guidelines will be updated and revised by the COP after the trial periods specified in the corresponding COP decisions,[5] and that the COP/MOP will take into account this experience and may refine these guidelines for national systems accordingly.

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[5] By its decision 3/CP.5, the COP decided that possible revisions to the UNFCCC reporting guidelines on annual inventories should be considered by the SBSTA at its fifteenth session. The Subsidiary Body for Implementation (SBI), following the advice of the SBSTA, agreed to set up a two-year trial period beginning in early 2000, to assess the UNFCCC reporting guidelines on annual inventories, particularly the common reporting format, with a view to revising them at COP 7, taking into consideration, *inter alia*, experience gained by Parties and the secretariat, and the input of the IPCC (FCCC/1999/8, para. 26 (c)). By its decision 6/CP.5, it adopted for a trial period covering inventory submissions due in 2000 and 2001 the guidelines for the technical review of greenhouse gas inventories from Annex I Parties. The COP requested the SBI to evaluate the experience with the technical review, with a view to adopting revised guidelines for the technical review of inventories at the eighth session of the COP.

14. The secretariat is aware that the IPCC good practice guidance is still under consideration by the IPCC. The guidelines for national systems were prepared on the assumption that the report will be completed by the sixteenth IPCC plenary to be held from 1 to 8 May 2000. A change in this assumption would require a reconsideration of the approach elaborated below. Parties would need to reconsider the implications at the twelfth session of the SBSTA.

15. The secretariat recognizes that the IPCC good practice guidance could make an important contribution to improving the quality of GHG inventories. With this in mind, the secretariat included several elements of this guidance within the guidelines for national systems and identified some aspects as mandatory requirements. These elements, if accepted by the Parties, would promote higher quality inventories by Annex I Parties in relation to the current practices under the Convention.

16. The secretariat also recognizes that the achievement of higher quality inventories is an evolutionary process. Further improvements in these guidelines for national systems could be envisioned once Parties gain more experience following the good practice guidance and additional resources are available for the preparation of national GHG inventories. Therefore, some other elements of the IPCC good practice guidance were not included as mandatory in the draft guidelines for national systems. The secretariat hopes it has proposed an appropriate balance between mandatory and desirable elements in the draft guidelines.

17. It is also assumed that after consideration of the IPCC good practice guidance by the SBSTA, Annex I Parties will decide to use that guidance to the extent possible and test it when preparing their national GHG inventories to be submitted from the year 2001. This test would facilitate the refining of these guidelines for national systems, as well as of the UNFCCC reporting guidelines on annual inventories and the guidelines for technical review of inventories of Annex I Parties, by the COP and/or the COP/MOP, as appropriate.

18. The draft guidelines for national systems take into account the need for consistency and coherence with other provisions of the Kyoto Protocol, such as other guidelines, modalities and rules under Articles 3.3, 3.4, 5.2, 6, 7, 8, 12 and 17. Additional elements resulting from work on these articles may need to be reflected in the guidelines for national systems in the future. In particular, participants in the workshop mentioned in paragraph 7 above concluded that the relationship between national systems under Article 5.1 and national registries should be defined at a later stage. In this context, the following questions need to be considered:

(a) Will national registries be part of the national systems under Article 5.1?, and

(b) If not, what would be the relationship between national registries and national systems?

19. Participants also suggested that further consideration of the linkages between national systems and efforts to quantify the effectiveness of domestic actions to either reduce GHG emissions or increase GHG removals may be needed.

20. The second draft of the guidelines for national systems includes several footnotes that provide supplementary information. Most of them will not be included when the guidelines are completed. Footnotes describing elements of the good practice guidance, namely footnotes 7, 8, 12, 13, 14, 15, 16, 17, 18, and 20, will be replaced with references to the corresponding paragraphs of the IPCC report on good practice guidance, once it has been adopted.

21. Article 5.1 of the Kyoto Protocol stipulates that each Annex I Party shall have in place a national system, no later than one year prior to the start of the first commitment period. It may take several years to establish the proper institutional and procedural arrangements for such a system. Timely completion of the guidelines for national systems by COP 6 would enable Parties to begin to make such arrangements and could allow the testing of national systems in advance of the year 2007. This may include a review of national systems before the start of the first commitment period, if Parties so wish. This approach may also be necessary to improve and refine these guidelines. Furthermore, early completion of the guidelines would allow Parties to be better prepared to meet the requirements of the Kyoto Protocol, in particular with their obligations under Article 5.1.

Annex

SECOND DRAFT OF THE GUIDELINES FOR NATIONAL SYSTEMS FOR THE ESTIMATION OF ANTHROPOGENIC GREENHOUSE GAS EMISSIONS BY SOURCES AND REMOVALS BY SINKS UNDER ARTICLE 5.1 OF THE KYOTO PROTOCOL[1]

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Appendix

Figure and tables 19

[1] All articles referred to in these guidelines are those of the Kyoto Protocol. For the sake of brevity, the Kyoto Protocol is not specified after each article.

I. OBJECTIVES

1. The objectives of national systems under Article 5.1 for the estimation of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, referred to below as national systems, are:

(a) To enable Parties included in Annex I to the Convention (Annex I Parties) to estimate greenhouse gas (GHG) emissions by sources and removals by sinks, as required by Article 5.1;

(b) To assist Annex I Parties in meeting their commitments under Articles 3 and 7;

(c) To facilitate the review of the information submitted under Article 7 by Annex I Parties, as required by Article 8;

(d) To assist Annex I Parties to ensure and improve the quality of their inventories[2] as requested by Article 10 (a).

II. DEFINITION OF NATIONAL SYSTEM

2. A national system includes all institutional, legal and procedural arrangements within an Annex I Party for estimating GHG emissions by sources and removals by sinks, for reporting and archiving inventory information, and for facilitating its review as required by these guidelines for national systems[3], to meet the Party's obligations under the Kyoto Protocol.

III. CHARACTERISTICS

3. National systems may differ among Annex I Parties depending on their national circumstances. National circumstances shall not negatively affect the performance of the functions described in these guidelines.

4. National systems should ensure the transparency, consistency, comparability, completeness and accuracy of inventories as defined in the guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories, adopted by the Conference of the Parties (COP) at its fifth session, referred to below as the reporting guidelines on annual inventories, or any subsequent revisions of these guidelines adopted by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP), taking into account relevant decisions of the Conference of the Parties.

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[2] "National GHG inventories" is referred to simply as "inventories" in these guidelines for the sake of brevity.

[3] The guidelines for national systems for the estimation anthropogenic emissions by sources and removals by sinks under Article 5.1 of the Kyoto Protocol are referred to as "guidelines for national systems" in this document.

5. National systems should ensure confidence in the quality of the inventory by collecting activity data and selecting emission factors appropriately, and by implementing uncertainty assessment and quality assurance and control activities, including procedures for the verification of the inventory data at the national level, as described in these guidelines for national systems.

6. National systems should be robust enough to support compliance with the Kyoto Protocol commitments related to the estimation of GHG emissions and removals by ensuring that the mandatory functions set out in these guidelines for national systems are performed and that every effort is made to perform the desirable functions.

IV. OTHER DEFINITIONS

7. In the context of the guidelines for national systems the following definitions are accepted:

(a) Good practices, as defined in the Intergovernmental Panel on Climate Change (IPCC) good practice guidance,[4] are a set of procedures that aim to produce inventories which are accurate in the sense of being neither over- nor underestimated as far as can be judged, and in which uncertainties are reduced as far as practicable. Good practices aim also to produce inventories that are transparent, documented, consistent over time, complete, comparable, assessed for uncertainties, subject to quality assurance and control and efficient in the use of resources. The good practice guidance covers choice of estimation methods appropriate to national circumstances, quality assurance and quality control at the national level, quantification of uncertainties, and data archiving and reporting to promote transparency. Good practice guidance provides a reference that complements and is consistent with the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories;[5]

(b) Quality assurance and quality control (QA/QC) encompass activities aimed at improving the quality of the inventories. These activities may be common to all the inventory source-categories or may be specific to some of them. Quality control and quality assurance activities have different characteristics as defined below:

(i) Quality control (QC) is a system of routine technical activities implemented by inventory development personnel to measure and control the quality of the inventory as it is being developed. It is designed to provide routine and consistent checks to ensure data integrity, correctness and completeness, to identify and address errors and omissions, and to document and archive inventory material and record all activities. QC

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[4] The IPCC "Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories" is referred to as the "IPCC good practice guidance" in these guidelines. The report is intended to be available for consideration by the SBSTA at its twelfth session.

[5] The Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories are referred to as the IPCC Guidelines in these guidelines for national systems.

activities include accuracy checks on data acquisition and calculations and the use of approved standardized procedures for emission calculations, measurements, uncertainty estimations and reporting. Higher tier QC activities also include technical reviews of sources, activity data and emission factors, and methods;

(ii) Quality assurance (QA) activities include a planned system of review procedures conducted by personnel not directly involved in the inventory compilation development process. These QA review procedures should be performed upon a finalized inventory, preferably by independent third parties, following the implementation of the QC procedures. These QA review procedures shall verify that data quality objectives were met and shall aim to ensure that the inventory represents the best possible estimate of emissions and sinks given the current state of scientific knowledge and data available, and assess the effectiveness of the QC programme;

(c) Source category refers to the emissions by sources and removals by sinks of GHGs as used in the IPCC Guidelines in describing methods to estimate a national GHG inventory. In each IPCC source category emissions and removals of different GHGs may exist;

(d) Key source category is one that is prioritized within the inventory because its estimate has a significant influence on a country's total inventory of direct GHGs in terms of the absolute level of emissions, the trend in emissions, or both. The identification of key source-categories allows the resources available for inventory preparation to be prioritized and the best possible estimates prepared for the most significant sources;[6]

(e) Decision tree is a procedure set out in the IPCC good practice guidance for choosing the method of estimating the emissions and removals of a given source category in each sector of the IPCC Guidelines, which is illustrated in the figure 1 shown in the appendix to these guidelines. The decision trees formalize the choice of estimation method most suited to national circumstances. The sectoral advice linked to the decision trees also provides information on the choice of emission factors and activity data;

(f) Recalculation is a procedure for re-estimating GHG emissions and removals of previously submitted inventories as a consequence of changes in methodologies, changes in the manner in which emission factors and activity data are obtained and used, or the inclusion of new source categories. Generally, recalculations are a consequence of improved inventory capacity and data availability and are desirable when they result in more accurate and complete estimates.

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[6] Generally, inventory uncertainty is lower when emissions are estimated using the most rigorous methods, but as resources are finite, this may not be feasible for every source category. In accordance with the good practice guidance, key source categories are those for which the most rigorous methods should apply, whereas this is not required for non-key source categories. Key source categories are identified by performing a quantitative analysis in which the uncertainty of the emission and/or removal estimates of each source category is taken into account. Key source categories may also be identified using relevant qualitative criteria. Specific methodological guidance is provided in the IPCC good practice guidance.

The recalculation of historic emissions and removals should be performed when methods have been changed or refined[7], when new source categories or gases are included in the national inventory, or when errors in the estimates are identified and corrected. The entire time-series of emissions and removals, including the base year, should be calculated using the changed or refined methods in order to consistently assess emission trends.

V. GENERAL FUNCTIONS

8. Each Annex I Party shall undertake through its national system, taking into account its national circumstances, the following general functions:

(a) The implementation of institutional, legal and procedural arrangements, as appropriate, between the government agencies and other entities responsible for the performance of all functions defined in these guidelines;

(b) The preparation and reporting of national annual inventories in a timely manner according to the relevant COP/MOP decisions, including the collection of inventory activity data and selection of emission factors, in accordance with the methodologies of the IPCC Guidelines, as elaborated by any good practices agreed upon by the COP/MOP; and in accordance with the reporting guidelines on annual inventories, or any subsequent revisions of these guidelines adopted by the COP/MOP, taking into account relevant decisions of the Conference of the Parties;[8]

(c) The reporting in a timely manner of the supplementary information to be incorporated in the annual inventory[9] for the purposes of ensuring compliance with Article 3, to be determined by the COP/MOP in accordance with Article 7;

(d) The formulation and implementation, where relevant and to the extent possible, of cost-effective national programmes, as well as cooperation in regional programmes where appropriate, to improve the quality of national emission factors, activity data and methodologies, including measuring and monitoring, for the preparation and periodic updating of national inventories using methodologies agreed upon by the COP and consistent with the IPCC

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[7] A methodological change occurs when a country uses a different tier for estimating emissions from a source category or when it moves from a tier described in the 1996 Revised IPCC Guidelines to a national method. A methodological refinement occurs when a country uses the same tier for estimating emissions but applies it using a different data source or a different level of aggregation, or if data of higher quality could be introduced due to improved data collection methods.

[8] By its decision 3/CP.5, the COP decided that possible revisions to the UNFCCC reporting guidelines on annual inventories should be considered by the SBSTA at its fifteenth session. The Subsidiary Body for Implementation (SBI), following the advice of the SBSTA, agreed to set up a two-year trial period beginning in early 2000, to assess the UNFCCC reporting guidelines on annual inventories, particularly the common reporting format, with a view to revising them at COP 7, taking into consideration, *inter alia*, experience gained by Parties and the secretariat, and the input of the IPCC.

[9] The information referred to here includes only supplementary information related to GHG emissions and removals. The definitive scope of the supplementary information under Article 7.1, which may include inventory and non-inventory related information, will be defined in the guidelines under Article 7 to be adopted by COP/MOP.

Guidelines, as elaborated by any good practices agreed upon by the COP, and in line with the provisions of Article 10 (a);

(e) The provision of timely and competent responses to the questions raised during the review process under Article 8; and

(f) The implementation of arrangements for ensuring and updating the technical competence of the staff involved in the inventory development process.

VI. SPECIFIC FUNCTIONS

9. In order to perform the above-mentioned general functions in accordance with the characteristics of national systems set out in these guidelines, each Annex I Party shall undertake specific functions in its inventory development process,[10] namely during inventory planning, preparation, reporting and management.

10. The inventory planning functions to be undertaken by Parties shall include:

(a) The designation of a single national entity responsible for the national inventory and its whole development process, and the allocation of responsibilities in the inventory development process, including those related to quality control (QC) and quality assurance (QA).

(b) The elaboration of a documented plan for the planning, preparation, reporting and management of the inventory. This plan shall include:

(i) Specific QC procedures to be implemented along with the inventory development process, and QA procedures, where appropriate;

(ii) Activities aimed to ensure sufficient capacity for performing the functions defined in these guidelines, such as data collection for estimating GHG emissions and removals;

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[10] For the purpose of these guidelines, the inventory development process encompasses the indicative steps of inventory planning, preparation, reporting and management. These steps of the inventory development process are considered in these guidelines only in order to clearly identify the functions to be performed by the national systems, as described in paragraphs 10 to 12 below.

(iii) Activities to address the issues identified for improvement of the inventory development process and of the inventory quality improvement programme, and in external reviews conducted under Article 8 or commissioned by the national entity responsible for the inventory;

(c) The establishment of the institutional, legal and procedural arrangements for collecting, processing, communicating and archiving inventory data necessary for the preparation, reporting and management of the inventory as described in paragraphs 8, 10, 11, 12, 13 and 14 of these guidelines. These arrangements shall provide for the necessary authority for the timely collection of data;

(i) The arrangements referred to in sub-paragraph (c) above related to activity data shall aim to ensure close cooperation between the national entity responsible for the national inventory and the entity responsible for collection of activity data, in particular national statistical services and other organizations, such as enterprises, that may collect and/or maintain activity data;

(ii) The arrangements referred to in sub-paragraph (c) above related to emission factors shall aim to ensure close cooperation between the national entity responsible for the national inventory and other entities responsible for developing, compiling and recommending emission factors to be used in the inventories. These arrangements may include cooperation with relevant regional and/or international entities;

(iii) The arrangements referred to in subparagraph (c) above shall include the development and implementation of QC and QA activities, where appropriate;

(d) The implementation of processes for the official consideration and approval of the inventory prior to its submission and for consideration and approval of the use of new and/or revised emission factors and relevant decisions for recalculating estimates that were submitted in previous inventories;

(e) The establishment of internal quality objectives, in line with the national programmes referred to in paragraph 8(d) above, for activity data, emission factors and methodologies and the implementation of the necessary activities to meet this internal quality objective within a fixed deadline. Inputs from the review process under Article 8, other review commissioned under national systems and results of the QA/QC activities should be taken into account for the establishment of such quality objectives.

11. The inventory preparation and reporting functions to be undertaken by Parties:

(a) Shall include:

(i) The identification of the base year, taking into account the provisions of Article 3.5 for those Annex I Parties undergoing the process of transition to a market economy and the provision of Article 3.8 for estimates of hydrofluorocarbon (HFC), perfluorocarbon (PFC) and sulphur hexafluoride (SF_6) emissions. This base year is to be used for the purpose of calculating the assigned amounts under Article 3.7, and to be used in these guidelines for national systems, where appropriate;

(ii) The identification of key source categories by performing a quantitative analysis, at least the tier 1 approach for identifying key source categories[11] of the IPCC good practice guidance. Parties are encouraged to identify the key sources using the tier 2 approach provided that relevant data is available. The identification of key source categories should include the consideration of other qualitative criteria,[12] such as high expected emission growth, high uncertainty or unexpectedly low or high emissions, as described in the IPCC good practice guidance. The list of source categories to be used for the identification of key source categories is included in table 1[13] in the appendix to these guidelines. Each GHG emitted from a single source category is to be considered separately, unless there are specific methodological reasons for treating these GHGs collectively;

(iii) The use of the good practice guidance in all source categories in accordance with the corresponding decision trees and with the national availability of data. This includes the pursuit of the good practice guidance related to the choice of emission factors, activity data and uncertainty assessment for the relevant method (tier)[14] in each source category. Parties should make every effort to use the most rigorous method(s) (tier(s)) included in the decision trees of the good practice

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[11] The tier 1 approach is the simplest for the identification of key sources. The tier 2 method is a more detailed analysis which builds on the tier 1 approach and incorporates uncertainty estimates at the level of source categories in the calculations.

[12] In most cases, the application of these qualitative criteria will identify source categories already defined as key through the quantitative analysis. Some additional key sources may be identified, however, and these may be added to the list of key sources.

[13] This list is based on the source categories of the IPCC good practice guidance.

[14] In almost all source categories of the IPCC Guidelines, two or more tiers exist for estimating GHG emissions and removals. Generally, when data are available, the less uncertain estimates result from a higher IPCC tier.

guidance in the source categories that are identified as key, unless such methods would not be the most appropriate for a given source category;

(iv) The preparation and reporting of the inventory following the good practice guidance for estimating inventory uncertainty and recalculating previously submitted estimates of emissions and removals and the specific guidance provided in paragraphs 10, 11, 12, 20 and 24 of the reporting guidelines on annual inventories. In keeping with the aim of the good practice guidance, total inventory uncertainty is to be reported in quantitative terms to help in identifying areas for further improvement and to track the accuracy of the inventory;

(v) The compilation of the national inventory in accordance with the reporting guidelines on annual inventories, including the common reporting format, and taking into account the provisions of paragraph 11 (a) (ii) and (iii) above, as well as the supplementary information referred to in paragraph 8 (c) above;

(vi) The application of the general-inventory-level QC procedures (tier 1 QC)[15] as included in table 2 in the appendix to these guidelines, bearing in mind that it will not be possible to check all aspects of inventory input data, parameters and calculations every year. Checks of data and calculations related to identified key sources are to be conducted annually. Parties are encouraged to apply these checks and calculations to the non-key source categories, to the extent possible;

(vii) An annual or periodical internal evaluation of:

- The inventory development process;
- The inventory quality improvement programme; and
- The actions taken by the Party in response to the problems identified in the reports of the external reviews conducted under Article 8 or commissioned by the national entity responsible for the inventory;

(viii) The preparation of texts that should be included in the national inventory report, as requested in paragraph 33 of the reporting guidelines on annual inventories, and information on:

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[15] Tier 1 is the simpler QC procedure described in the IPCC good practice guidance. It focuses on the processing, handling, documenting, archiving and reporting procedures that are common to all the inventory sources.

- Actions taken under the programmes for improving the quality of inventories referred to in paragraph 8 (d) above; and
- Key source categories for which the most rigorous method(s) (tier(s)) referred to in paragraph 11 (a) (iii) above were not used, including actions taken or planned to improve the estimate of these key source categories;

(b) Should include:

(i) The application of source category-specific QC procedures (tier 2 QC)[16] for the individual source categories that are identified as key;

(ii) The application of source category-specific QC procedures (Tier 2 QC) for those individual source categories in which significant methodological and data revisions have taken place;

(iii) The conduct of a basic expert review of the inventory[17] by personnel that have not been involved in the inventory development, preferably an independent third party, before the submission of the inventory in accordance with the planned QA procedures referred to in paragraph 10 (b) above. Key source categories should be given priority as well as source categories where significant changes in methods or data have been made. All expert reviews should be well documented, preferably in a report or checklist format that shows the findings and recommendations for improvement.

12. The inventory management functions to be undertaken by Parties:

(a) Shall include:

(i) The archiving of the inventory information of each year, including the base year, in accordance with paragraph 35 of the reporting guidelines on annual inventories, or any subsequent revisions to these guidelines adopted by the COP/MOP, taking into account relevant decisions of the Conference of the Parties. This information should facilitate the review activities by the expert review team under Article 8 by enabling estimates of emissions and removals to be traced back to the original disaggregated emission factors and activity data;

(ii) The access to the archived inventory information by the expert review teams under Article 8, except for that part of the information which contains confidential data. This part of confidential information would be

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[16] In contrast to general QC techniques, tier 2 QC source category specific procedures are directed at emission and activity data and uncertainties used in the estimation methods of individual source categories.

[17] The focus of these QC procedures is to identify potential problems and make corrections where possible.

accessible under the provisions of confidentiality for managing inventory information to be developed by each Annex I Party in accordance with the appropriate guidelines to be adopted by the COP/MOP;[18]

(iii) The archiving of internal documentation of QA/QC activities and the reports of external reviews under Article 8 and those commissioned under the national systems, including corrections and modifications to the inventory resulting from these activities;

(iv) The response to requests for clarifying inventory information resulting from the different stages of the review process of the inventory information and information on the national system in a timely manner, as described in the revised guidelines for the technical review of the inventories of Annex I Parties to be adopted by the COP at its eighth session or any subsequent revision adopted by the COP/MOP and in the guidelines for the review of implementation by expert review teams, as appropriate;

(v) The archiving of the list of used annual key-source categories and the documentation of the key source category identification approaches; and

(vi) The archiving of improvement programmes and inventory plans as described in paragraphs 8 (d) and 10 (b) above, as well as reports described in paragraph 13 below.

(b) Should include:

The conduct of more extensive expert peer review and/or audits as additional QA procedures[19] within the available resources as described in the good practice guidance.

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[18] The provisions of confidentiality may be developed in future versions of the revised guidelines for the technical review of the inventories of Annex I Parties adopted by the COP at its eighth session or by the COP/MOP.

[19] Expert peer review consists of a review of calculation or assumptions by experts in relevant fields. This procedure is accomplished by reviewing the documentation associated with the methods and results. There are no standard tools for expert peer review, and its use should be considered on a case-by-case basis. Audits are used to evaluate how effectively the inventory development team complies with the minimum specifications outlined in the QC plan.

VII. REPORTING AND INFORMATION SHARING [20]

13. Each Annex I Party shall include in its national communication:

(a) A description of how it has undertaken the functions defined in paragraphs 8, 10, 11 (a) and 12 (a) above during the period between successive national communications. This includes an explanation of what functions were not performed or only partially performed and information on actions planned or taken to perform them in the future;

(b) A description of the inventory development plan as defined in paragraph 10 (b) (ii) above; and

(c) A description of the institutional arrangements as defined in paragraphs 8 (a) and 10 (a), (c), and (d) above, including the key legal and procedural arrangements.

14. Each Annex I Party:

(a) Shall make available its national GHG inventory report, including the common reporting format, according to the reporting guidelines on annual inventories or any subsequent revisions of these guidelines adopted by the COP/MOP for its base year and years constituting the commitment period. The information shall be made available on a national website;

(b) Shall make available the postal and electronic addresses of the national entity responsible for the inventory; and

(c) Should make available to any interested Party, organization or person, the information described in paragraph 13 above in either printed or electronic format, upon request.

VIII. ADOPTION AND UPDATING OF THE GUIDELINES

15. These guidelines for national systems shall be adopted, reviewed and revised, as appropriate, according to the decisions of the COP/MOP, taking into account any relevant decision of the COP.

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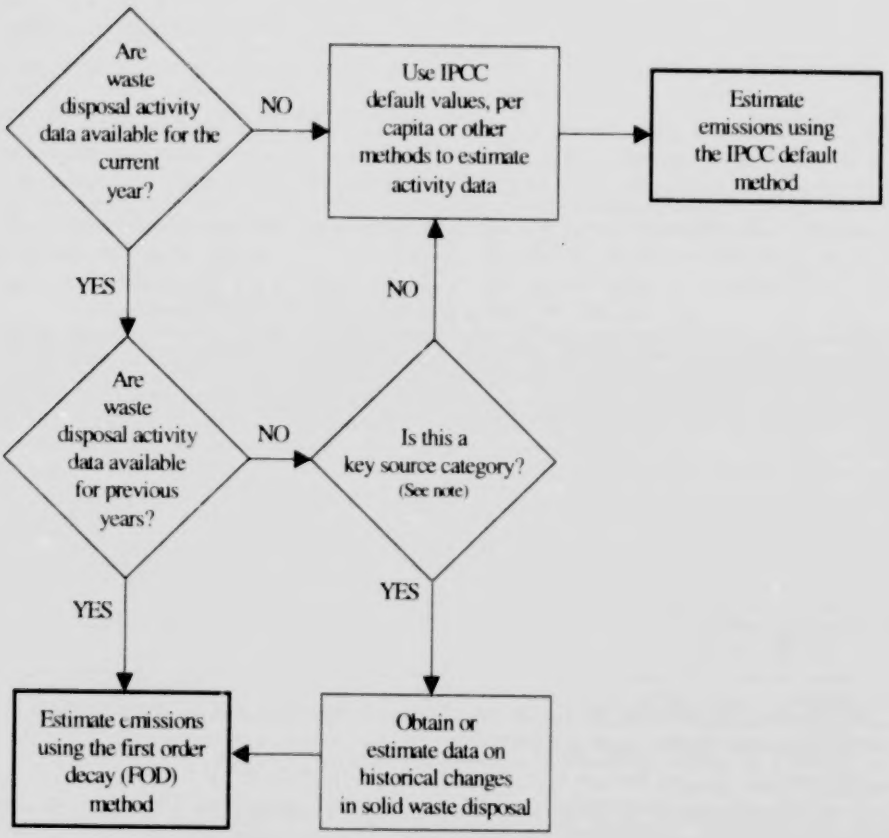
[20] This section of the guidelines will be incorporated and possibly further be expanded in the guidelines for reporting supplementary information under Article 7. Parties may wish to consider if this section should remain in these guidelines for national systems.

Appendix

FIGURE AND TABLES

Figure 1. Sample decision tree for choice of method for estimating methane emissions from solid waste disposal sites


Are waste disposal activity data available for the current year?
NO
Use IPCC default values, per capita or other methods to estimate activity data
Estimate emissions using the IPCC default method
YES
NO
Are waste disposal activity data available for previous years?
NO
Is this a key source category? (See note)
YES
YES
Estimate emissions using the first order decay (FOD) method
Obtain or estimate data on historical changes in solid waste disposal

NOTE: A **key source category** is one that is prioritized within the national inventory system because its estimate has a significant influence on a country's total inventory of direct greenhouse gases in terms of the absolute level of emissions, the trend in emissions, or both.

Table 1. List of source categories to be assessed

Source categories to be assessed in key source analysis	Special considerations
Emissions from energy use	
CO_2 emissions from stationary combustion	Disaggregate to the level where emission factors are distinguished. In most inventories, this will be the main fuel types. If emission factors are determined independently for some sub-categories, these should be distinguished in the analysis.
Non-CO_2 emissions from stationary combustion	Assess emissions of $_4$ and N_2O separately.
Mobile combustion: road vehicles	Assess emissions of CO_2, CH_4 and N_2O separately.
Mobile combustion: waterborne navigation	Assess emissions of CO_2, CH_4 and N_2O separately.
Mobile combustion: aircraft	Assess emissions of CO_2, CH_4 and N_2O separately.
Fugitive emissions from coal mining and handling	If this source is key, it is likely that underground mining will be the most significant subcategory.
Fugitive emissions from natural gas and oil	This source category comprises several subcategories which may be significant. Countries should assess this source category, if it is key, to determine which subcategories are most important.
Agricultural sources	
CH_4 emissions from livestock enteric fermentation	If this source is key, it is likely that cattle, buffalo and/or sheep will be the most significant subcategories.
CH_4 emissions from manure management	If this source is key, it is likely that cattle and/or swine will be the most significant subcategories.
N_2O emissions from animal waste management systems	
CH_4 and N_2O emissions from savanna burning	Assess emissions of CH_4 and N_2O separately.
CH_4 and N_2O emissions from agricultural residue Burning	Assess emissions of CH_4 and N_2O separately.
Direct N_2O emissions from agricultural soils	
Indirect N_2O emissions from nitrogen used in agriculture	
CH_4 emissions from rice production	
Industrial processes and the new gases	
CO_2 emissions from cement production	
CO_2 emissions from lime production	
CO_2 emissions from the iron and steel industry	
N_2O emissions from adipic and nitric acid production	Assess adipic and nitric acids separately.
PFCs emissions from aluminium production	

Table 1 (continued)

Source categories to be assessed in key source analyses	Special considerations
SF_6 in magnesium production'	
SF_6 emissions from electrical equipment	
SF_6 emissions from other uses	
SF_6 emissions from production of SF6	
PFC, HFC, SF_6 emissions from semiconductor manufacture	Assess emissions of all compounds jointly on a global warming potential (GWP)-weighted basis, since they are all used in similar fashions in the process.
Substitutes for ozone depleting substances (ODS)	Assess emissions of all HFCs and PFCs used as substitutes for ODS jointly on a GWP-weighted basis, given the importance of having a consistent method for all ODS sources.
Estimation of HFC-23 from HCFC-22 manufacture	
Emissions from waste	
CH_4 emissions from solid waste disposal sites	
CH_4 emissions from wastewater handling	
N_2O emissions from human sewage	
Emissions from waste incineration	Assess emissions of CO_2 and N_2O separately.
Other	Other sources of direct greenhouse gas emissions not listed above should also be included.

Note: The land-use change and forestry source category is not included in the table. In principle, the the methods for identification of key source categories described in the IPCC good practice guidance could be applied to that category, but further work on the topic is necessary.

Table 2. Tier 1 general inventory level QC procedures

QC ACTIVITY	PROCEDURES
Select the source categories from each sector as the samples for QC checks and document the categories and the selection criteria.	· Identify the key source categories and ensure that these are included in the QC process. Select a number of additional source categories, representing all sectors. · Establish criteria and processes under which all source categories will be checked during a given period of time (e.g. every three years).
Check for data input errors during the transcription from the original references and document the categories checked and the findings.	· Confirm that bibliographical data references are properly cited. · Check that assumptions and criteria for selection of activity data and emission factors are documented. · Cross-check a sample of input data from each source category (either measurements or parameters used in calculations) for transcription errors.
Check that emissions are calculated correctly and document the categories checked and the findings.	· Manually duplicate a representative sample of emission calculations. · Selectively mimic complex model calculations with abbreviated manual calculations to judge relative accuracy.
Check that parameter and emission units are correctly recorded and that appropriate conversion factors are used and document the categories checked and the findings.	· Check that units are properly labelled in calculation sheets. · Check that units are correctly carried through from beginning to end of calculations. · Check that conversion factors are correct. · Check that temporal and spatial adjustment factors are used correctly.
Check the integrity of database files and document the categories checked and the findings.	· Confirm that the data path is correctly represented in the database and that all necessary processing steps have been followed. · Confirm that data relationships are correctly represented in the database. · Ensure that data fields are properly labelled and have correct design specifications.
Check for consistency in data between source categories and document the categories checked and the findings.	· Identify parameters (e.g., activity levels, constants) that should be common to multiple source categories and confirm that there is consistency in the values used for these parameters in the emission calculations.
Check that the movement of inventory data among processing steps is correct and document the categories checked and the findings.	· Check that emission data are correctly aggregated from lower reporting levels to higher reporting levels when preparing summaries. · Check that emission data are correctly transcribed between different intermediate products.

Table 2 (continued)

QC ACTIVITY	PROCEDURES
Check that uncertainties in emissions and removals are estimated or calculated correctly and document the categories checked and the findings.	· Check that qualifications of experts providing uncertainty estimates are appropriate. · Check that qualifications, assumptions and expert judgments are recorded. Check that calculated uncertainties are complete and calculated correctly. · If necessary, manually duplicate error calculations or a small sample of the probability distributions used by Monte Carlo analyses, including the modes of all parameters.
Undertake review of internal documentation and document the categories checked and the findings.	· Check that there is detailed internal documentation to support the estimates and enable duplication of the emission and uncertainty estimates. · Check that inventory data, supporting data, and inventory records are archived and stored to facilitate detailed review.
Check methodological and data changes resulting in recalculations and document the categories checked and the findings.	· Check for temporal consistency in time-series input data for each source category. · Check for consistency in the algorithm/method used for calculations throughout the time-series.
Undertake completeness checks and document the findings.	· Confirm that estimates are reported for all source categories and for all years from the appropriate base year to the period of the current inventory. · Check that known data gaps that result in incomplete source category emission estimates are documented.

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METHODOLOGICAL ISSUES

GUIDELINES UNDER ARTICLES 5, 7 AND 8 OF THE KYOTO PROTOCOL

Report of a workshop on issues related to Articles 5, 7 and 8 of the Kyoto Protocol

Addendum

ELEMENTS OF ARTICLES 7 AND 8 AND METHODOLOGIES FOR ADJUSTMENTS UNDER ARTICLE 5.2

Note by the secretariat

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I. INTRODUCTION

A. Mandate

1. Article 7.1[1] states that each Annex I Party shall incorporate in its annual inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases (GHG) not controlled by the Montreal Protocol, submitted in accordance with the relevant decisions of the Conference of the Parties (COP), the necessary supplementary information for the purposes of ensuring compliance with Article 3. Article 7.2 states that each Annex I Party shall incorporate in its national communication, submitted under Article 12 of the Convention, the supplementary information necessary to demonstrate compliance with its commitments under the Kyoto Protocol.

2. In accordance with Article 7.4, the Conference of the Parties serving as the meeting of the Parties (COP/MOP) to the Protocol shall adopt at its first session, and review periodically thereafter, guidelines for the preparation of the information required under Article 7, taking into account guidelines for the preparation of national communications by Annex I Parties adopted by the COP.

3. Article 8.4 states that the COP/MOP shall adopt at its first session, and review periodically thereafter, guidelines for the review of implementation of the Protocol by expert review teams taking into account the relevant decisions of the COP.

4. Article 5.2 states that methodologies for estimating anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol shall be those accepted by the Intergovernmental Panel on Climate Change (IPCC) and agreed upon by the COP at its third session. Where such methodologies are not used, appropriate adjustments shall be applied according to methodologies agreed upon by the COP/MOP at its first session.

5. At its fourth session, the COP adopted decision 8/CP.4 on the preparations for the first session of the COP/MOP. It decided that the preparatory work would include guidelines for the preparation of information under Article 7, with respect to both annual inventories and national communications from Annex I Parties, and for the review of implementation by expert review teams under Article 8. It also decided that the preparatory work should include methodologies for adjustments under Article 5.2, with a view to completion by COP 6 and with the purpose of recommending their adoption by the COP/MOP at its first session (FCCC/CP/1998/16/Add.1).

6. At their tenth sessions, the subsidiary bodies endorsed the work programme on methodological issues related to Articles 5, 7 and 8 of the Kyoto Protocol (FCCC/SB/1999/2). The development of guidelines under Articles 7 and 8 and of methodologies for adjustments under Article 5.2 are an integral part of the work plan.

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[1] For the sake of brevity all articles referred to in this paper are those of the Kyoto Protocol, unless otherwise specified. Also, "Annex I Parties" refers to Parties included in Annex I to the Convention.

7. At its eleventh session, the Subsidiary Body for Scientific and Technological Advice (SBSTA) recalled Article 5.2 of the Kyoto Protocol and took note of submissions by Parties on the issue of adjustments. It considered that adjustments referred to in this article should only be applied when inventory data submitted by Parties are incomplete and/or are calculated in a way that is not consistent with the IPCC 1996 Revised Guidelines as elaborated by any good practice agreed upon by the COP. It noted that these adjustments would result in substitution of a revised technical estimate for the purpose of accounting of the Parties' emissions and assigned amounts. It also considered that adjustments related to Article 5.2 could be an element of the review process under Article 8 of the Kyoto Protocol. It noted that the methodologies and procedures for adjustments, including the question of who should apply these adjustments, should be further examined in the preparatory work related to Articles 5 and 8 of the Kyoto Protocol (FCCC/SBSTA/1999/14, para. 51 (c)).

8. At its tenth session, the SBSTA requested the secretariat to organize a workshop on national systems and issues relating to adjustments, referred to in Article 5, before its twelfth session (FCCC/SBSTA/1999/6, para. 34 (d)). At its eleventh session, the SBSTA requested the secretariat to include in the agenda of this workshop the consideration of the methodological and technical aspects of guidelines under Articles 7 and 8 (FCCC/SBSTA/1999/14, para. 51 (a)). The SBSTA requested the secretariat to prepare documentation for consideration at the above-mentioned workshop on topics including preliminary options for methodologies to apply adjustments.

9. The SBSTA also requested the secretariat to provide an initial draft on modalities for adjustments under Article 5.2 and possible elements for inclusion in the guidelines under Articles 7 and 8, taking into consideration information from the workshop, for consideration by the SBSTA at its twelfth session.

B. Scope of the note

10. This note has been prepared in response to the request by the SBSTA and reflects the discussions at the workshop on issues related to Articles 5, 7 and 8 of the Kyoto Protocol, which took place in Bonn from 14 to 16 March 2000. The note contains three annexes; the first annex contains elements of draft guidelines under Article 8, the second contains elements of draft guidelines under Article 7 and the third draft guidance on methodologies for adjustments under Article 5.2. Within the annexes, commentary and questions for Parties are shown in *italics*. The note also includes a discussion of each of the annexes, including linkages to other provisions of the Protocol.

11. The elements of draft guidelines under Articles 7 and 8 and draft guidance on methodologies for adjustments under Article 5.2 reflect information provided by Parties at the workshop and earlier submissions by Parties contained in documents FCCC/SBSTA/1999/MISC.9 and Add.1, as well as FCCC/SBSTA/2000/MISC.1. However, some of the elements, such as those in each of the objectives sections, were not discussed at the workshop. Parties may wish to consider this note together with the conclusions of the workshop, contained in document FCCC/SBSTA/2000/INF.5.

12. Parties may wish to consider the underlined questions in this note and also the questions shown in *italics* in each of the annexes and, if making a submission, may wish to include their comments under the same headings.

C. Possible action by the SBSTA

13. The SBSTA may wish to consider the information in this note and to endorse or modify the main elements of the draft guidelines under Articles 7 and 8 and draft guidance on methodologies for adjustments under Article 5.2. The SBSTA may also wish to consider how issues related to other provisions of the Kyoto Protocol should be further reflected in the guidelines. The elements included in draft guidelines and draft guidance on methodologies for adjustments are not comprehensive. Further elements may be identified during consideration by the SBSTA, with a view to completing preliminary draft guidelines and draft guidance on methodologies for adjustments by COP 6 for forwarding to COP/MOP 1.

14. The SBSTA may wish to provide guidance related to preparations for its thirteenth session and, in particular on how to proceed with the work on methodologies for adjustments under Article 5.2, including the involvement of relevant organizations, in particular the IPCC.

II. DISCUSSION

A. General approach

15. The secretariat has tried to ensure consistency and coherence between the elements included in the annexes to this note. Furthermore, it has taken into account ongoing work on national systems, land-use, land-use change and forestry, mechanisms and compliance. However, in some areas consistency will only be possible once Parties have chosen between different approaches to particular questions. Hence this note describes cross-cutting issues related to Articles 5, 7 and 8, mechanisms and compliance and, in this context, raises a number of issues that Parties may wish to consider further.

16. The secretariat assumes that a COP and/or COP/MOP decision will be taken in relation to the use of these guidelines prior to the first commitment period. This approach would facilitate the refinement of these guidelines as well as those on national systems.[2] Parties may wish to consider this issue further and if necessary provide guidance on the continuation of this methodological work in the period between COP 6 and COP/MOP1.

B. Approach to guidelines under Article 8 of the Kyoto Protocol

17. Parties envisage a single review process for the implementation of Annex I Parties' commitments under the Convention and Kyoto Protocol. The single review process could be split into an inventory-related review, including national systems under Article 5.1, and a

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[2] A draft of the guidelines for national systems under Article 5.1 is included in document FCCC/SBSTA/2000/INF.5/Add.1.

national communication review. Annex I to this note adopts this approach on the basis that there will be separate inventory review teams and national communication review teams requiring separate guidelines.

18. Parties, in their submissions, have noted that the guidelines for review under the Kyoto Protocol should build upon and be supplemental to the guidelines for review under the Convention. This is the approach assumed in this note. However, currently there are no guidelines for the review of national communications under the Convention. Parties may wish to take into account document FCCC/SBI/2000/3 on the experience with the in-depth reviews of second national communications. It describes issues related to the review process and outlines possible options for the third round of in-depth reviews under the Convention, including the development of guidelines.

19. Parties have noted that guidelines for review of national communications under Article 8 depend upon the outcome of discussions on Article 7, Article 3.3 and 3.4 and mechanisms. Submissions from Parties, in general, contain little information about national communication review and there was limited discussion at the workshop. Parties may wish to consider to what extent these guidelines may be elaborated by COP 6.

20. The guidelines for review under Article 8 should contain guidance to ensure consistency in the approach of expert review teams. It was noted by participants at the workshop that this should be designed to take into account Parties' national circumstances. Parties may wish to take into account the two-year trial period for use of the guidelines for technical inventory review under the Convention (FCCC/CP/1999/7 and decision 6/CP.5 [3]). Some aspects of the guidance under Article 8 may need to be further elaborated only after the trial period.

21. Parties have stressed that the composition of the expert review team and steps to ensure they have the appropriate expertise is very important in the design of the review process. Parties may wish consider this issue further (see annex I, part I, sections H and I).

22. Parties envisage that the review process will allow for Parties to correct problems before adjustments may be recommended. They have noted that adjustments should be conservative in order to maintain incentives to follow the IPCC Guidelines,[4] including good practice. In addition, the calculation and application of adjustments has implications for timing (see figure in annex I). For these reasons, adjustments could be considered as a last resort. Parties may wish to consider this issue further.

23. Parties have noted that each inventory review for an Annex I Party should be completed within a year. They took into account information provided by the secretariat that in the current in-depth review process, it is not uncommon for Parties to take three to six months to respond to

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[3] For the full text of decisions adopted by the Conference of the Parties at its fifth session, see document FCCC/CP/1999/6/Add.1.

[4] IPCC Guidelines refer to the "Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories".

questions or to comment on draft reports. The participants at the workshop suggested that, at each stage in the review process, Parties should be given fixed periods in which to respond. Parties may wish to consider how much time should be allowed. However, even if the number of steps in the review process is minimized, rapid review for all Parties will not be possible without cooperation from Parties and necessary resources. In this regard, Parties may wish to consider reporting their annual GHG inventory in November for the year prior to submission. This would shorten the reporting period by five months and could also enable information to be checked, synthesized and assessed according to a schedule that would match that of the subsidiary bodies and the COP. Also, at this stage, it is not known what resources will be required to review each inventory within a year. Whether reviews are organized by the secretariat with experts nominated by governments who are not paid by the secretariat, or undertaken by experts who are compensated by the secretariat to ensure their availability and responsiveness, or undertaken in another manner cannot be determined until after the trial period for the technical GHG inventory review under the Convention. However, additional resources are very likely to be required for any of the above approaches.

C. Approach to guidelines under Article 7 of the Kyoto Protocol

24. Annex II to this note contains elements covering the reporting of information under Article 7.1 and 7.2.

25. Workshop participants agreed that the UNFCCC reporting guidelines on annual inventories and national communications, adopted by COP 5 (decisions 3/CP.5 and 4/CP.5), should serve as the basis for the development of guidelines under Article 7 of the Kyoto Protocol. They also indicated that supplementary information for Article 3.1 and 3.13 could be reported under Article 7.1 and/or Article 7.2. The elements in annex II to this note follow these suggestions, but Parties may wish to provide additional views on this issue.

26. Linkages exist between what is reported under Article 7 and ongoing work related to other provisions of the Kyoto Protocol, in particular on Article 3.3 and 3.4, Article 5 on national systems and adjustments, Articles 6, 12 and 17 on mechanisms and work on compliance. For this reason, some elements of the guidelines under Article 7 may only be incorporated following the outcome of this work. Annex II to this note includes explanatory text in *italics* for such cases.

D. Approach to methodologies for adjustments under Article 5.2

27. In response to the mandate referred to in paragraph 8 above, the secretariat prepared a technical paper on preliminary options for methodologies to apply adjustments (FCCC/TP/2000/1). The technical paper summarizes the main findings of seven reports prepared by consultants for the secretariat. The full reports of the consultants on the IPCC source categories "fuel combustion activities" (three reports), "fugitive emissions from fuels", "industrial processes", "agriculture" and "waste" were also made available to participants at the

workshop to facilitate discussions.[5] The secretariat considered these reports, as well as discussions at the workshop and submissions by Parties, in preparing this document.

28. Workshop participants recommended that guidance on methods for adjusted emission estimates should be developed and that these methods may vary according to the source category and greenhouse gas, type of problem (e.g. missing estimate, poor emission factor), and/or data availability. As far as possible, this guidance should consist of a hierarchy of approaches so as to guide the process of calculating adjustments, including the choice of methods for a specific case. It would also include information about the required documentation of the approach taken and assumptions made by the Party or body calculating the adjustments.

29. Parties may wish to refer to the conclusions of the workshop related to methodologies for adjustments under Article 5.2 as contained in paragraphs 28 and 29 of document FCCC/SBSTA/2000/INF.5. These conclusions provide some direction on how to approach the work on methodologies for adjustments. However, the workshop participants did not draft elements for such methodologies.

30. For illustrative purposes, the secretariat has prepared draft guidance (annex III to this note) on the basis of the conclusions of the workshop. Some sections are more elaborate than others. Following consideration by Parties, parts of that text could be considered as conclusions by the SBSTA as the basis for further work.

31. Article 5.2 of the Kyoto Protocol refers to "methodologies for adjustments" while the participants in the workshop used the term "guidance on" adjustments. They also referred to the need to undertake further technical work on "methods for adjustments". The structure of the guidance contained in annex III contains aspects related to the choice of methods as well as a detailed descriptions of these methods. It therefore takes a comprehensive approach to what may be needed under Article 5.2. Parties may wish to consider whether this approach to developing guidance is appropriate.

32. Various aspects of this work could be performed by either the UNFCCC secretariat or the IPCC National Greenhouse Gas Inventories Programme. Parties may wish to recall the division of labour between this programme and the UNFCCC. The IPCC is responsible for developing and assessing scientifically sound inventory methods and practices, whereas the UNFCCC is responsible for determining how Parties report under the Convention, collating and archiving of national inventory data and review, including compilation and synthesis, and analysis of Parties' inventory data.

33. Parties may wish to give consideration to the draft guidance, including its structure, scope and eventual level of detail. Furthermore, Parties may wish to consider which parts of the guidance should be developed by whom and by when, bearing in mind the IPCC *Report on Good*

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[5] These papers are available as working papers No. 3 (a) (2000) to 3 (g) (2000) from the secretariat upon request or at the UNFCCC web site (http://www.unfccc.int/sessions/workshop/000134/).

Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories and the trial period for technical review of inventories under the Convention.

34. Parties may also wish to consider that extremely detailed technical methods may not be necessary if relatively few problems require adjustments and that developing such detailed methods could be a complex task as noted in document FCCC/TP/2000/1.

35. Workshop participants suggested that methodologies for adjustments could either be included in guidelines under Article 8 or elaborated independently under Article 5.2. Parties may wish to consider this issue further.

E. Linkages between Articles 5, 7 and 8

36. In determining what is to be reviewed under the Article 8 guidelines, it is important to know what information will be reported and when. For this reason, it is important to coordinate the development of guidelines under Articles 7 and 8. For example, if the review guidelines are divided into inventory-related aspects and national communications, then the elements in these two parts of the guidelines under Article 8 may not simply correspond to review of information reported under Article 7.1 and 7.2, if national systems are reported under Article 7.2 (see annex II, paragraph 13).

37. Workshop participants at the workshop noted that the guidelines for national systems under Article 5.1 and reporting under Article 7.1 would be both useful in categorizing inventory problems. This could be linked to determination of whether a problem is *de minimis*, first or second order. For example, if Parties "shall" report something and they do not, this may be a first or second order problem, whereas if Parties "are encouraged" to report something and they do not, this could be *de minimis* (see annex I, part I, section F).

38. It is generally agreed that each Party should be subject to a single review of each national communication. Some parts of the inventory-related review, such as the review of national systems or parts thereof, could be conducted in conjunction with the national communication review, assuming this also requires an in-country visit. If the guidelines are designed in this way then Parties may wish to consider the timing of national communications and their review. Parties may wish to recall decision 11/CP.4, which requires third national communications to be submitted by November 2001 and a fourth national communication at a date to be determined three to five years thereafter. This implies that the fourth national communications will be provided some time between 2004 and 2006. If the timing of the national communications is not compatible with the desired timing for the reporting and review of information on national systems then Parties may wish to consider interim reporting, recalling the SBI conclusion that consideration of issues related to interim reporting should be postponed until matters relating to reporting and review under the Kyoto Protocol have been resolved (FCCC/SBI/1999/8, para. 23 (a)).

39. Workshop participants in the working group on Article 7 discussed what should be reported in order to show demonstrable progress in fulfilling commitments under the Protocol.

They agreed that, in addition to what is reported under the Convention, future Annex I national communications should include supplemental information under Article 7, *inter alia*, on the implementation of national systems, preparations for the implementation of national registries and use of the Kyoto Protocol mechanisms and on fixing the base year for the inventory. However, review of demonstrable progress was not discussed by the working group on Article 8. Whilst information of relevance to this issue could be included in the fourth national communications, there could instead be interim reporting in 2005 accompanied by review in terms of a compilation and synthesis. This may require the development of separate guidance. Parties should give further consideration to the timing of reporting on and any related review of demonstrable progress.

F. Linkages between Articles 7 and 8 and mechanisms

40. Submissions from Parties indicated and participants at the workshop noted that the base year emission inventory, estimated in accordance with Article 5 and Article 3.7, the national system, as defined in guidelines under Article 5.1, national registries, to be defined by Parties in their discussions on mechanisms, and the national communication could be subject to review under the Article 8 guidelines prior to the first commitment period. In particular, participants noted that base year emission inventories should be reviewed prior to the first commitment period, after which they may be fixed for the duration of the commitment period. It was, however, also noted that there could be circumstances in which recalculations of base year inventories may be allowed during the commitment period. Parties may wish to give further consideration to this issue and to what should be reviewed prior to the first commitment period. The workshop did not discuss any possible linkages between a pre-commitment period review and mechanisms.

41. The Parties, in their discussions on mechanisms, made proposals for criteria for participation in emissions trading under Article 17. In one proposal, compliance with Articles 5 and 7 is a prerequisite for participation, whereas another allows for participation in emissions trading unless a Party is found to be in non-compliance with Articles 5 and 7. Parties may wish to consider if the guidelines for review should be based on a premise that Parties are in compliance or not in compliance. Parties may also wish to consider the timing of reporting, review, the establishment of compliance procedures and the commencement of emissions trading under these options.

42. It was noted that expedited procedures could be considered for review and compliance in the event that a Party is found not to meet participation criteria for mechanisms both before and during the commitment period.

43. Parties may wish to consider this issue further. Parties may wish to consider if the guidelines for review under Article 8 should encompass any aspects related to Article 6 projects, taking into account Article 6.4 as well as proposals by Parties included in document FCCC/SB/2000/3 (see part II on issues related to compliance).

44. The elements of draft guidelines under Articles 7 and 8 may only apply to Annex I Parties. Parties may wish to consider if reporting and review in relation to Article 12 should also encompass non-Annex I Parties (see annex I, part I, paragraphs 1(a), 23 and 24 and annex II, paragraphs 5, 6 and 11.) This issue may be considered further in the mechanisms discussions.

G. Linkages between Articles 5.2 and 8 and compliance

45. The review process is closely linked to compliance procedures. Workshop participants highlighted several areas where joint discussions may be useful. Parties may wish to consider if the following points should be discussed by a particular group or jointly.

46. Parties generally envisage a rapid review and compliance process. This must be borne in mind in the design of procedures contained in the review guidelines. Parties may wish to consider the timing implications for the entire review and compliance process, including each step in the process, in particular procedures for the calculation and application of adjustments. The figure in annex I illustrates two possible scenarios, one in which the inventory submission of a Party does not require adjustments and the other in which it does. The timing given in this figure is speculative and is dependent upon how the review process and involvement of compliance institutions evolves.

47. It is envisaged by Parties that during the review process problems are identified. Parties are then given an opportunity to correct problems or provide explanations to the expert review team as to why something is not a problem. After this, some problems may remain. It may be useful for the compliance institutions if the review process identifies what type of problems these are. This applies to both national communication and inventory-related reviews; the workshop did not discuss the former, hence Parties may wish to consider the issue further.

48. At the workshop an approach was proposed for the categorization of inventory problems. The secretariat has proposed a preliminary elaboration of this approach, taking into account discussions at the workshop and also the mandatory and non-mandatory elements of various guidelines (see annex I, part I, section F). Participants noted that guidance for review teams should take into account the outcome of current work on IPCC good practice guidance, in particular analysis of key source categories, tiers and time-series analysis and the importance of outlier detection. They also noted that the trial period of technical inventory reviews under the Convention should also provide useful information about problem identification and categorization.

49. Article 8 of the Kyoto Protocol notes that, on the basis of expert review team reports, "the secretariat shall list those questions of implementation indicated in such reports for further consideration...". Article 6.4 also makes reference to a "question of implementation". The workshop discussed when a question might become a question of implementation, but not what constitutes a question of implementation. Parties may wish to consider how the proposed categorization of problems may be linked to "questions of implementation".

50. Workshop participants noted that questions raised at stages of the review process only involving the secretariat and not expert review teams would be labelled "questions". At stages involving expert review teams, questions would continue to be called "questions" until the Party has been given an opportunity to provide explanations or solve a problem. Only thereafter could a question become a "question of implementation". However, even then it may be for the screening process of the compliance institution to determine if the question is a "question of implementation". Parties may wish to give further consideration to this issue, including the nomenclature.

51. Workshop participants discussed the possible role of the compliance institutions in relation to adjustments. Different options are discussed in annex I to this note. Parties may wish to consider if and when the compliance institutions need to approve the calculation of an adjustment and/or approve its application (see annex I, part I, section G).

52. Workshop participants noted that a comparison of assigned amounts with aggregated emissions after the first commitment period was a cross-cutting issue with links to compliance discussions and possibly mechanisms. Parties may wish to consider whether this comparison should be part of the review process.

53. Workshop participants noted that prior to review and thereafter whenever a problem is found, Parties may be provided with access to technical advice from the expert review team or other Parties and/or may request technical or financial assistance from the compliance institutions. In this case, the review process should proceed as normal. Parties may wish to consider the practicality of providing assistance prior to a review, allowing a review to proceed whilst assistance is being provided and the implications for compliance. The provision of technical and financial assistance from non-review bodies could be considered in the context of compliance discussions.

Annex I

ELEMENTS OF DRAFT GUIDELINES UNDER ARTICLE 8 OF THE KYOTO PROTOCOL

PART I

ELEMENTS RELATED TO THE REVIEW OF NATIONAL INVENTORY SUBMISSIONS, NATIONAL SYSTEMS AND NATIONAL REGISTRIES

A. Objectives[1]

1. The objectives of the guidelines on the review of national inventory submissions, national systems and national registries are:

(a) To promote consistency in the review of national inventory submissions and supplementary information under Article 7 including national systems and transfers and acquisitions of assigned amount units (AAUs), emission reduction units (ERUs) under Articles 6 and 17 for Annex I Parties and certified emission reductions (CERs) under Article 12 for Annex I and non-Annex I Parties;[2]

(b) To establish a process for a thorough and comprehensive technical assessment of national inventory submissions, national systems and national registries;

(c) To ensure that the Conference of the Parties serving as the meeting of the Parties (COP/MOP) has adequate information on greenhouse gas (GHG) inventories and trends in emissions and removals by sinks;

(d) To examine in an open and transparent manner the consistency of quantitative and qualitative information submitted by Annex I Parties with the guidelines for reporting under Article 7 of the Kyoto Protocol and guidelines for national systems under Article 5.1 [and guidelines for national registries under Article x];[3]

(e) To provide the COP/MOP with a thorough technical assessment of the implementation of Annex I Parties' commitments under the Kyoto Protocol [supplementary to those under Articles 4.1(a) and 12.1(a) of the Convention]; and

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[1] The objectives section could be merged with the objectives section of part II.

[2] This paper assumes that information will be reported by both Annex I and non-Annex I Parties in relation to CERs. This issue may be discussed by Parties in relation to the mechanisms.

[3] National registries may be reported under guidelines related to the mechanisms or under Article 5.1.

(f) To assist Annex I Parties in improving the quality of their national GHG inventories, national systems and national registries.

(g) [To facilitate assessment of the criteria for participation in the mechanisms under Articles 6, 12 and 17.] (*Parties may wish to consider this issue further.*)

B. General approach

2. These guidelines generally relate to the review of supplementary information under Article 7, but some aspects are also relevant to the review of information reported under the Convention, as described below.[4]

3. Some aspects of the review shall occur annually and some on a less frequent basis, in accordance with the timing described below. Those aspects of the review which occur annually shall be conducted in conjunction with the technical review of each Annex I Party's greenhouse gas inventory. The results shall be incorporated into the reports under the technical review of Annex I Parties' greenhouse gas inventories.

4. Option A: The results of the review of national systems and national registries shall be contained in a report separate from the annual inventory review reports and the national communication review report.

Option B: The results of the review of national systems and/or national registries shall be integrated into the annual inventory review report or the national communication review report.

5. Each Annex I Party shall be subject to at least one in-country review during the commitment period, preferably in conjunction with the in-country visit for its national communication review.

6. Additional in-country visits may occur if recommended by the review team in accordance with the guidance below and with the consent of the Party concerned.

7. At any stage in the review process, the secretariat and/or expert review team may raise questions for the Party. Parties shall be provided with the opportunity to clarify questions or provide additional information within agreed time limits.

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[4] According to decision 3/CP.5, possible revisions to the UNFCCC reporting guidelines on annual inventories should be considered at the fifteenth session of the SBSTA. The SBI, following the advice of the SBSTA, agreed to set up a two-year trial period, beginning in 2000, to assess the UNFCCC reporting guidelines on annual inventories, particularly the common reporting format, with a view to revising them. By its decision 6/CP.5, the COP decided that the secretariat should conduct a two-year trial inventory review using the UNFCCC guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention (FCCC/CP/1999/7).

8. Parties will make every effort to correct identified problems within agreed time limits in consultation with the expert review team.

9. The final reports of the expert review teams shall be forwarded to COP/MOP or an institution that may be established for compliance-related purposes.

C. Coverage

10. The following elements should be reviewed for the purposes of assessing the implementation of the Protocol:

(a) Base year or period emission inventory estimated in accordance with Articles 3.7 and 5;

(b) National systems, as defined in guidelines on national systems;

(c) National registries (to be defined by Parties' discussions in the context of mechanisms); and

(d) The national inventory submission and supplementary information reported under Article 7.1, including information relating to transfers and acquisitions of AAUs, CERs and ERUs under Articles 6, 12 and 17.

D. Timing and procedures

11. The procedures in these guidelines complement those in the guidelines for the technical review of Annex I Parties' greenhouse gas inventories (FCCC/CP/1999/7).

12. The secretariat shall conduct an initial check of supplementary inventory information reported annually under Article 7.1 in conjunction with the initial check of information submitted under the Convention.

13. The expert review teams may recommend an additional in-country visit in the following circumstances:

(a) At the request of the Party being reviewed;

(b) On identification of severe [first order] problems with the national inventory requiring in-depth analysis involving the experts of the Party being reviewed.

14. The base year emission inventory shall only be reviewed once during the commitment period, if no recalculations occur. (*Q. Should this provision also apply if there is review prior to the first commitment period ?*)

15. All data reported annually under Article 7.1 should be reviewed annually, but the extent to which the data need to be reviewed in depth may depend on the frequency with which the data are updated or if changes occur in the underlying national system and/or registry system.[5] The annual review for each Annex I Party should be completed within one year of submission of its annual inventory. (*Q. Does this timing include a decision by the COP/MOP taken on the basis of advice provided by an institution that may be established for compliance-related purposes ?*)

16. The national system, as defined in guidelines for national systems under Article 5.1 and the national registry (to be defined by Parties' discussions in the context of mechanisms) shall be reviewed simultaneously and preferably in conjunction with the review of the national communication. (*Q. Does this provision apply before as well as during the first commitment period ?*) Key aspects of national systems under Article 5.1 and national registries may be reviewed on an annual basis. (*Parties may wish to consider the provision of guidance for expert review teams on this.*)

17. If the expert review team identifies a question, the Party is given six weeks in which to respond and correct any problems or provide an explanation to the expert review team as to why, in its view, it is not a problem.

18. The expert review team determines if a problem is *de minimis*, second order or first order, quantifiable or procedural and, technically, may or may not be subject to an adjustment, in accordance with the guidance below.

19. In addition to the requirements under the Convention, the final report of the expert review team should, where relevant, include:[6]

(a) Information on the assistance that has been provided to the Party by the compliance institutions prior to or during review;

(b) The final applied or proposed adjustments, whether an adjustment was accepted by the Party, the methodology used to calculate the adjustment and the rationale for the adjustment;

(c) A recommendation on which, if any, parts of the inventory could be exempt from in depth consideration in the following review, provided that no major changes occur during the period between reviews; and

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[5] This issue about all data not being reviewed in depth every year could also be considered when the UNFCCC technical inventory review guidelines are updated.

[6] What should be included in the report under the Convention can be more fully considered during the revision of the guidelines following the trial period for the technical inventory reviews.

(d) Aggregate information on eligible transfers of AAUs, ERUs and CERs under Articles 6, 12 and 17 between the Party being reviewed and other Parties.[7]

E. Guidance for the expert review teams

20. The expert review teams should follow the guidance provided in this section.

GHG inventories

21. The expert review teams shall follow the same procedures and guidance established in the guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention or any subsequent revisions of this guidance by the COP/MOP.

22. The expert review teams shall have access to and may consider information on projects, including emission factors, under Article 6 where this may be relevant to consideration of the emission inventory of the Party being reviewed.[8]

Information on transfers and acquisitions under the mechanisms

23. As part of the individual annual inventory review, the expert review team should aggregate all eligible transfers and acquisitions of AAUs, CERs and ERUs up to and including the latest year available.

24. [As part of the annual compilation and accounting of emission inventories and assigned amounts, the secretariat should include the aggregate information on all eligible transfers and acquisitions of AAUs, CERs and ERUs for all Parties up to and including the latest year available in its database.]

National systems under Article 5.1

25. The expert review team should assess the extent to which the guidelines for national systems under Article 5.1 have been adhered to, especially any mandatory elements.

(*Parties may wish to consider how this section could be further elaborated, taking into account the development of draft guidelines for national systems under Article 5.1 and information to be reported under Article 7.*)

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[7] Eligible transfers and acquisitions may be used to meet a Party's commitments under Article 3 and hence this term refers to a situation in which a Party is not subject any restrictions in this regard, for example, is not subject to an unresolved question of implementation which may affect the use of acquisitions under Article 6. Ineligible transfers and acquisitions may be reported, but should not be included in the review team's aggregation exercise. Parties may wish to consider an alternative term.

[8] Such information may be particularly relevant where entities account for a substantial percentage of a Party's emissions in a particular sector.

National registries (to be defined by Parties' discussions in the context of mechanisms)

26. The expert review team should assess the extent to which the guidelines for national registries have been adhered to, especially any mandatory elements.

(*Parties may wish to consider how this section could be further elaborated.*)

F. Classification of inventory problems

27. The following guidance applies to information reported in the national inventory, including supplementary information.

28. Expert review teams should use the following to classify inventory problems:

(a) Problems are procedural or quantifiable:

(i) Quantifiable problems are related to the estimation of GHG emissions and/or removals and may be expressed quantitatively;

(ii) Procedural problems are related to the reporting of information in accordance with the guidelines for reporting and/or the implementation of the functions of national systems in accordance with the guidelines under Article 5.1 and/or the implementation of the functions of national registries (to be defined by Parties' discussions in the context of mechanisms);

(b) Quantifiable and procedural problems are *de minimis*, second order or first order in terms of severity:

(i) First order and *de minimis* problems should be categorized on the basis of the guidance below;

(ii) Second order problems are those which are neither first order nor *de minimis*.

(*The remainder of this section is an elaboration by the secretariat of the views expressed at the workshop. It should be noted that participants did not consider whether procedural problems should be classified as first order, second order or de minimis or how this could be approached, so Parties may wish to consider this issue further and propose alternatives. This classification of problems could be updated, changed or refined in the light of experience gained during the trial period of the technical inventory reviews.*)

29. The expert review teams shall classify problems based on the following:

(a) Quantifiable problems

Type of problem	First order	*De minimis*
1) Missing estimates of GHG emisssions from sources or removals by sinks.	• Estimates from a source category[9] or categories which, on the basis of an adjustment methodology and in the view of the expert review team, individually or cumulatively may account for more than [5] [10] per cent of total emissions[10] in a given year. • Estimates from a source category which in the view of the Party or the expert review team is a key source, in accordance with the provisions of paragraph 11(a)(ii) of the guidelines for national systems.	Estimates from a source category or categories which, on the basis of an adjustment methodology and in the view of the expert review team, individually or cumulatively account for less than [0.25] per cent or [1] per cent respectively of total emissions for a given year.
2) Mistakes in the calculation of estimates of GHG emissions from sources or removals by sinks, including suspected fraud.	In the view of the expert review team, after detailed consideration with the Party involved, it is evident that the IPCC Guidelines, as elaborated by any good practices agreed upon by the COP, were not followed, resulting in an error in the estimate of a key source category. This includes the use of unreliable activity data, the selection of which ignores the provisions of paragraph 11 (a)(iii) of the guidelines for national systems.	Actual estimates from a source category, or estimates on the basis of an adjustment methodology and in the view of the expert review team, individually or cumulatively account for less than [0.25] per cent or [1] per cent respectively of total emissions for a given year.
3) Problems following the calculation of adjustments.	• Estimates from adjusted source categories account for more than [5] [10] per cent of total emissions in any given year. • The difference between the total emissions of the submitted inventory and the adjusted inventory exceeds [30] per cent in a given year. • The sum of percentage differences between total emissions of the submitted inventory and the adjusted inventory for each year in the commitment period exceeds [30] percentage points.	Not applicable.
4) Incomplete time-series	• Significant inconsistency in the time-series and recalculations for key source categories for which there is not a valid explanation. *(quantitative criteria need to be developed)*	*(To be elaborated)*

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[9] In accordance with source categories defined in the IPCC Guidelines, unless a specific exclusion is permitted.

[10] "Total emissions" in these tables refers to the Party's aggregate GHG emissions expressed in CO_2 equivalent.

(b) Procedural problems

Non-adherence to the requirements of reporting guidelines on annual inventories under the Convention and the Kyoto Protocol		
Type of problem	**First order**	***De minimis***
1) Non-provision of the inventory in accordance with the common reporting format (CRF) and the national inventory report (NIR).	• The CRF or the NIR is not provided for the base year or any subsequent year. • The CFR or the NIR is not provided in an official language of the United Nations	Minor inconsistencies between the inventory information provided in the CRF and the NIR.[11]
2) Incomplete provision of inventory information.	• Gaps in the tables of the CRF[12] for key source categories. • References or sources of information related to methodologies, emission factors and activity data as well as the rationale for their selection are not provided for key source categories. • Information on the assumptions and conventions underlying the emission and removal estimates as well as the rationale for their selection is not provided for key source categories. • No justification for recalculations reported or recalculations for key source categories not documented in a transparent manner.	• Non-provision of the requested additional information in the sectoral background table of the CRF. • Minor gaps in the information requested for the NIR and/or for the sectoral background tables of the CRF.
3) Inventory data are not reported in the format requested.	Annual inventory data are not reported electronically using the CRF.	
4) Inventory data are not archived as required.	• No archiving of the CRF and the NIR for the base year or a given year. • No archiving of original and recalculated inventory data for a given year. • Archived inventory data do not enable, where relevant, estimates to be traced back to the original disaggregated emission factors and activity data.	Minor gaps in the archiving of inventory information requested in accordance with paragraph 35 of the UNFCCC reporting guidelines for annual inventories.

[11] Parties should give further consideration to the use of the term "minor" in these tables. The outcome of the trial period for technical inventory reviews may assist in this regard.

[12] Missing estimates of GHG emissions and removals are also listed in the table of quantifiable problems. The same reporting gap should not be considered twice.

Non-adherence to the requirements of the guidelines for national systems under Article 5.1[13]		
Type of problem[14]	**First order**	***De minimis***
Non-implementation of the general functions defined in paragraph 8.	No implementation of any of the functions defined in paragraph 8.	
Non-implementation of the functions defined in paragraph 10 (planning functions).	No implementation of any of the functions defined in paragraph 10.	• No inclusion of quality assurance (QA) procedures in a Party's inventory plan, as defined in paragraph 10(b)(vi), if this does not negatively affect the quality of the inventory. • No cooperation with relevant regional and/or international entities as part of the arrangements referred to in paragraph 10 (c) (ii).
Non-implementation of the functions defined in paragraph 11 (preparation and reporting functions).	No implementation of any of the functions defined in paragraph 11(a).	• Non-implementation of the functions defined in paragraph 11(b), if this does not negatively affect the quality of the inventory • Non-identification of key source categories, as referred to in paragraph 11(a) (ii), using tier 2 approach, if this does not negatively affect the quality of the inventory. • Non-application of checks and calculations of the tier 1 quality control (QC) procedures, as referred to in paragraph 11(a)(vi), to the non-key source categories, if this does not negatively affect the quality of the inventory.
Non-implementation of the functions defined in paragraph 12 (management functions).	No implementation of any of the functions defined in paragraph 12(a).	• Non-implementation of the functions defined in paragraph 12(b), if this does not negatively affect the quality of the inventory. • Minor gaps in the archiving of the inventory requested in accordance with paragraph 12 (a).
Non-implementation of the functions defined in paragraphs 13 and 14 (reporting and information sharing).	Non-implementation of any of the functions defined in paragraph 13 and 14(a) and (b).	Non-implementation of the functions defined in paragraph 14(c).

[13] An early trial and review of the guidelines for national systems may assist in the refinement of this section of the guidelines.

[14] All paragraphs referred to in this table refer to the guidelines for national systems under Article 5.1 (FCCC/SBSTA/2000/INF.5/Add.1).

Non-adherence to requirements of the COP and/or COP/MOP decisions on submission		
Type of problem	**First order**	***De minimis***
Non-timely submission of the annual inventory.	A delay in the submission of more than one month.	A delay in the submission of less than 15 days
Non-timely submission of the national registry report.	To be defined by Parties' discussions in the context of mechanisms.	

G. Procedures for the calculation of adjustments in accordance with Article 5.2[15]

30. The expert review team recommends the calculation of an adjustment on the basis of the following:

(a) Only quantifiable problems may be subject to adjustment;

(b) [First order quantifiable problems may not be subject to adjustment];

(c) *De minimis* quantifiable problems may not be subject to adjustment, except in circumstances where cumulatively their effect is not *de minimis*.

31. If a Party corrects a problem identified by the secretariat or expert review team in accordance with the IPCC Guidelines and good practice, this does not constitute an adjustment.

32. The following procedures should be used for the calculation of adjustments:

(a) In its draft report, the expert review team should note if an adjustment is technically feasible, recommend if an adjustment is appropriate, in accordance with the guidance above, and provide a classification of the problem;

(At this stage, the compliance institution could determine if an adjustment is the appropriate response to first order problems. Otherwise, the review would proceed to the calculation of adjustments, subject to any constraints in the guidance above.)

Who calculates adjustments ?

Option A:

(b) Following the technical review of a national GHG inventory and recommendation by the expert review team, an adjustment or adjustments should be calculated by the Party

[15] Procedures for adjustments could be developed in conjunction with the development of methodologies for adjustments under Article 5.2 rather than before the completion of these methodologies.

concerned, in accordance with methodologies for adjustments under Article 5.2, within a period of four weeks;

(c) The expert review team should decide whether to accept the adjustment or adjustments calculated by the Party on the basis of the methodologies for adjustments under Article 5.2;

(d) In the event that the expert review team does not accept the Party's adjustment or the Party does not calculate an adjustment within the fixed period... (see points (e), (f) and (g) below for the continuation of (d).)

Option B:

(e) The expert review team or adjustment team [under the auspices of the expert review team] should calculate an adjustment, in accordance with methodologies for adjustments under Article 5.2, and inform the Party that the adjustment is to be included in the inventory;

(f) The Party shall decide and inform the expert review team within four weeks if it accepts the adjustment;

(g) If the Party disagrees with the expert review team's recommendation, it shall notify the compliance institution.

33. If an adjustment is included in a Party's inventory, but later the Party is able to provide a revised estimate, during the commitment period, the adjustment may be removed, subject to the approval of the expert review team and compliance institution. (*The issue of whether adjustments could be removed and the resulting implications needs further discussion. There may be guidance on limitations to this practice. Discussions could include whether a Party may be allowed to replace adjustments with emission estimates following good practice after the commitment period.*)

(These draft guidelines under Article 8 do not contain elements for the compliance institutions' involvement in adjustment procedures as these may be elaborated elsewhere. However, it is important that their role is considered carefully as this will affect the time-scale for the review process. It can be assumed that, in the event of an unresolved problem, an adjustment is calculated whenever this is technically feasible. Only in the case of a dispute between the Party and the review team would the compliance institute need to be involved. Alternatively, it has been suggested that adjustments are not calculated for first order problems and that the compliance institution should determine if adjustments are appropriate in such cases. This adds a step to the process. When the final expert review team report is sent to the compliance institute, if deemed necessary, the application of the adjustment may then be approved.)

H. Composition of expert review teams

34. Parties shall nominate experts to the roster of experts according to the usual procedures for such nominations. The secretariat, under the guidance of the chairmen of the subsidiary bodies, shall select experts from the roster for expert review teams on the basis of their expertise and taking into account geographic balance, to the extent possible.

35. The members of expert review teams for inventories should generally be different to those of national communication review teams for the review of each Party.

36. The majority of the expert review team shall be composed of government-nominated experts selected from the roster of experts.[16]

37. The expert review team should consist of an expert for each major or key sector of the inventory.

38. Experts not nominated by governments may be involved in the review process, providing inputs to the expert review team. Their role should be limited to assisting the expert review team and the secretariat, in particular with those tasks not involving judgements, and they should not have responsibility for the content of the review report. They should not be involved as part of the review of an individual country, at any stage, without the agreement of the Party concerned. Such experts should work under the guidance of the expert review team. (*How do Parties want non-government-nominated experts to be involved in the review process ? Who will invite them to participate ? Who will provide finance ?*)

I. Criteria for experts not nominated by governments

39. Experts should have proven experience with the use of the *IPCC Report on Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.*

40. Experts should be familiar with the UNFCCC and Kyoto Protocol reporting guidelines, the guidelines for national systems under Article 5.1 [and the guidelines for national registry systems (to be defined by Parties' discussions in the context of the mechanisms)].

41. Experts should preferably have experience in the compilation of a national GHG inventory.

J. Adoption and updating of the guidelines

42. These guidelines shall be adopted, reviewed and revised, as appropriate, according to the decisions of the COP/MOP, taking into account any relevant decisions of the COP.

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[16] Parties may wish to note that the Executive Secretary, in his letter of 6 March 2000 to Parties, provided notification of the process for updating the UNFCCC roster of experts. This makes provision for inventory experts to state their expertise and to be nominated to take part in the technical review of Annex I GHG inventories. Guidance is provided to Parties on the nomination of experts.

PART II

ELEMENTS RELATED TO THE REVIEW OF NATIONAL COMMUNICATIONS INCLUDING INFORMATION REPORTED UNDER ARTICLE 7.2

A. Objectives[17]

43. The objectives of the guidelines on the review of national communications, including information reported under Article 7.2, are:

(a) To promote consistency in the review of the information contained in the national communications, including information provided under Article 7.2, for Annex I Parties;

(b) To establish a process for a thorough and comprehensive technical assessment of each aspect of the national communication relevant to implementation of the Kyoto Protocol;

(c) To ensure that the Conference of the Parties serving as the meeting of the Parties (COP/MOP) has adequate information on the content of national communications, including information reported under Article 7.2;

(d) To examine in a facilitative, open and transparent manner the quantitative and qualitative information submitted by Annex I Parties in accordance with the guidelines for reporting under Article 7 of the Kyoto Protocol for consistency with those guidelines;

(e) To provide the COP/MOP with a thorough technical assessment of the implementation of Annex I Parties' commitments under the Kyoto Protocol [supplementary to those under Articles 4.1(a) and 12.1(a) of the Convention]; and

(f) To assist Parties in improving the implementation of their commitments under the Kyoto Protocol.

B. General approach[18]

44. These guidelines generally relate to the review of supplementary information on the implementation of the Kyoto Protocol, but some aspects are also relevant to the review of information reported under the Convention.

45. The members of national communication review teams should generally be different to those of the inventory review teams for the review of each Party.

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[17] This could be merged with the objectives in part I.

[18] This could be merged with the general approach in part I.

46. Each Annex I Party shall be subject to an in-country review of its national communication.

47. At all stages of the national communication review process, the secretariat shall provide individual Parties with the opportunity to clarify issues or provide additional information.

48. The Parties shall be sent draft review reports. Every effort shall be made to reach agreement with the Party on the content of the report prior to its publication. In the case of a Party and the expert review team being unable to agree on an issue, the Party may provide explanatory text to be included in a separate section of the report.

49. The final reports of the expert review teams shall be forwarded to the COP/MOP and/or any compliance institutions that may be established.

C. Coverage

50. The review should cover the national communication, including any supplementary information reported under Article 7.2, but excluding information on the national system and national registry;

D. Timing

51. Each Party's national communication shall be reviewed once.

52. The review of a Party's national communication should be completed within one year.

E. Selection of experts

53. The majority of the review team shall be composed of government-nominated experts.

54. The review team should consist of an expert for each major section of the national communication.

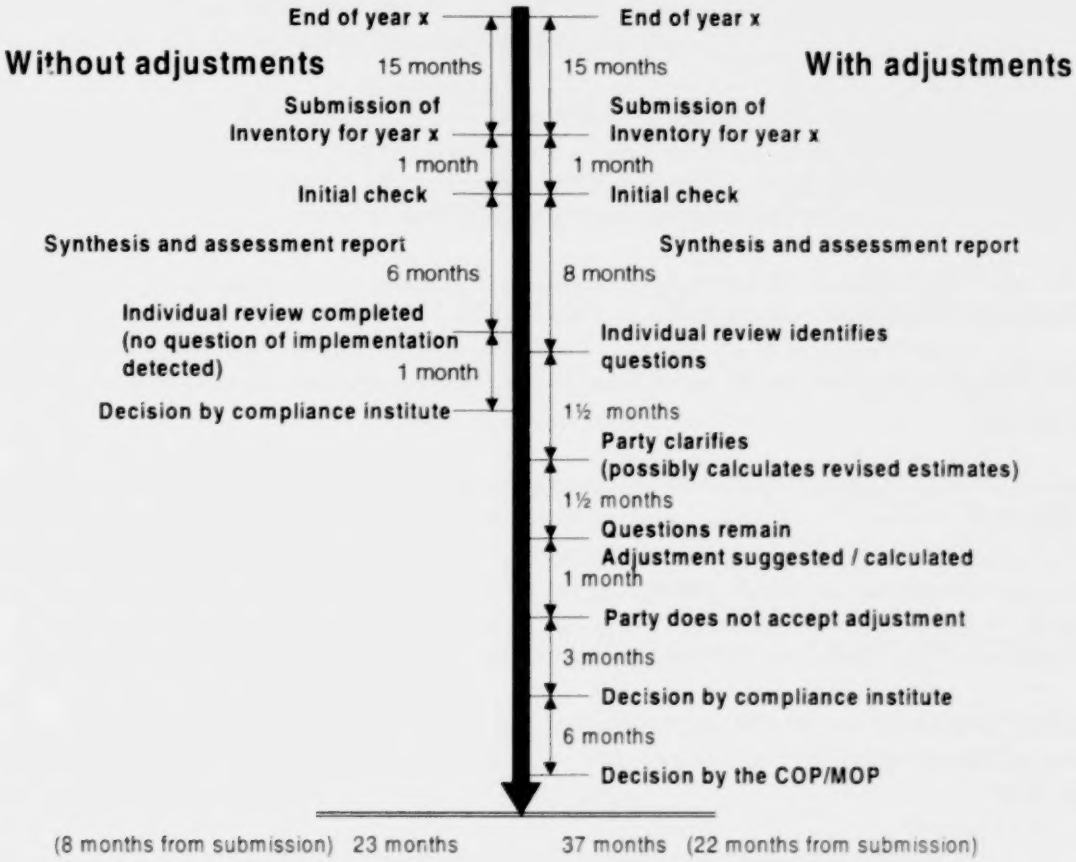
F. Procedures

55. The review team should follow the same procedures and guidance as are set out in the guidelines for the review of national communications under the Convention. (*N.B. Such guidelines do not currently exist. Parties may wish to consider this issue further.*)

G. Adoption and updating of the guidelines

56. These guidelines shall be adopted, reviewed and revised, as appropriate, according to the decisions of the COP/MOP, taking into account any relevant decisions of the COP.

Process and duration of possible inventory review under the Kyoto Protocol, in a given year by a single review team, with and without adjustments[19]



[19] This figure will not be included in the final guidelines under Article 8.

Annex II

ELEMENTS OF DRAFT GUIDELINES UNDER ARTICLE 7 OF THE KYOTO PROTOCOL

I. OBJECTIVES

1. The objectives of the guidelines under Article 7 of the Kyoto Protocol are:

(a) To enable Annex I Parties[1] to meet their commitments for reporting supplementary information in accordance with Article 7.1 and 7.2[2];

(b) To promote the reporting of consistent, transparent, comparable, accurate and complete information by Annex I Parties;

(c) To provide a basis for the Conference of the Parties serving as the meeting of the Parties to the Protocol (COP/MOP) to review the implementation of the Kyoto Protocol.

II. REPORTING OF INFORMATION UNDER ARTICLE 7.1

2. Information under Article 7.1 shall be reported annually to the secretariat with the inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol, submitted by Annex I Parties under the Convention and in accordance with decisions 11/CP.4 and 3/CP.5 and any relevant decisions of the COP/MOP.

3. Unless otherwise specified in these guidelines, supplementary information shall be submitted for the year prior to the year of submission, starting with the inventory due in the year 2009.

A. Supplementary information relevant to Article 3.3 and 3.4

4. Annex I Parties shall report information relevant to Article 3.3 and 3.4, in accordance with any guidelines, rules and modalities that may be adopted by the COP/MOP, taking into consideration information provided by the Intergovernmental Panel on Climate Change (IPCC), including the IPCC *Special Report on Land-use, Land-use Change and Forestry*.[3]

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[1] "Annex I Parties" in these guidelines refers to Parties included in Annex I to the Convention.

[2] For the sake of brevity, all articles referred to in these guidelines are those of the Kyoto Protocol, unless otherwise specified.

[3] Annex I Parties may need to report the relevant supplementary information for the last but one year prior to the year of submission.

B. Transfers and acquisitions of ERUs, CERs and AAUs [4]

5. Each Annex I Party shall report, in an agreed standard format, the following information[5]:

(a) Total holdings of ERUs, CERs and AAUs at the beginning and end of the calendar year, and their serial numbers, as appropriate;

(b) Total issuance, transfers, acquisitions and retirement of ERUs, CERs and AAUs during the calendar year, as appropriate, and their serial numbers, as appropriate; and

(c) Information related to projects under Article 6, including baseline and emission reduction calculations for each project.

6. Where relevant, each Annex I Party shall provide information on CERs obtained in accordance with Article 12.10, from 2000 up to and including the year prior to the year of submission, with the first inventory submission after the Kyoto Protocol has entered into force for that Party.

(Parties may wish to consider if and how the reporting requirements identified above should be included or referenced in this section, particularly in relation to the level of detail. They may wish to consider what information on clean development mechanism (CDM) projects should be reported by non-Annex I Parties and how it should be reported.)

C. National systems in accordance with Article 5.1

7. Each Annex I Party shall report information on changes that have occurred in its national system, compared to information reported in previous submissions, including information submitted under Article 7.2 (see paragraph 13 below).

D. Adjustments in accordance with Article 5.2

(Participants at the workshop did not identify specific information on this issue. Parties may wish to provide additional views on the type of information that may be needed (see also annex I, para. 19 (b) and annex III, Section VIII).

E. Compliance

(Participants at the workshop did not identify specific information to be reported on compliance. Parties may wish to consider if and how this section should be further elaborated.)

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[4] Emission reduction units, certified emission reductions and assigned amount units.

[5] See text for principles, modalities, rules and guidelines pursuant to Articles 6, 12 and 17 (FCCC/SB/2000/3) and submissions by Parties (FCCC/SBSTA/2000/MISC.1).

F. Information under Article 3.1 and 3.13

8. After the end of the first commitment period,[6] each Annex I Party shall report :

(a) All holdings in its national registry (to be defined by Parties' discussions in the context of mechanisms);

(b) Aggregate greenhouse gas emissions for the base year(s) or period, in accordance with Article 3.7;

(c) Aggregate greenhouse gas emissions for all years of the first commitment period; and

(d) Any transfers to future commitment periods in accordance with Article 3.13.

(Supplementary information to be reported under these Articles needs to take into account information reported under other sections of these guidelines. The participants at the workshop indicated that supplementary information under Article 3.1 and 3.13 could be reported under Article 7.1 and/or Article 7.2. Parties may wish to provide additional views on this issue.)

III. REPORTING OF INFORMATION UNDER ARTICLE 7.2

9. Information under Article 7.2 shall be reported with the national communication submitted under Article 12 of the Convention and in accordance with the relevant decisions of the COP and/or COP/MOP.

10. Unless otherwise specified in these guidelines, each Annex I Party shall report supplementary information, starting with the first national communication submitted after the Kyoto Protocol has entered into force for that Party.

A. National registries

(National registries are expected to be defined by the mechanisms group. Participants at the workshop did not identify specific information to be reported on this issue. Parties may wish to consider if and how this section should be elaborated.)

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[6] Taking into consideration decisions 11/CP.4 and 3/CP.5, a complete set of the information required to assess compliance with Article 3.1 and 3.13 will not be available, at the earliest, until 2014.

B. Supplementary information relevant to Articles 6, 12 and 17

11. Each Annex I Party shall report:[7]

(a) Information on how its project activities under Article 12 have assisted Parties not included in Annex I to the Convention in achieving sustainable development and in contributing to the ultimate objective of the Convention;

(b) Information aimed at ensuring transparency, efficiency and accountability through independent auditing and verification of project activities under Article 12;

(c) Information on projects under Article 6 ;

(d) Information on names and contact details of legal entities, within the jurisdiction of the Party, that are authorized to participate in emissions trading.

(Parties may wish to consider if and how the reporting requirements identified above should be included or referenced in this section, particularly in relation to the level of detail. They may wish to consider what information on CDM projects should be reported by non-Annex I Parties and how it should be reported.)

C. Joint fulfilment of commitments in accordance with Article 4

12. Annex I Parties that have reached an agreement to fulfil their commitments under Article 3 jointly and/or in the framework of, and together with, a regional economic integration organization which is itself a Party to the Kyoto Protocol, shall incorporate in their national communication the terms, procedures and/or arrangements of such an agreement.

(Parties may wish to consider what terms, procedures and/or arrangements, if any, should be reported and how they should be reported.)

D. National systems in accordance with Article 5.1[8]

13. Each Annex I Party shall provide a description of how it is undertaking the functions defined in paragraphs 8, 10, 11 (a) and 12 (a) of the guidelines for national systems under Article 5.1 (FCCC/SBSTA/2000/INF.5/Add.1). This should include:

(a) An explanation of what functions were not performed or only partially performed and information on actions planned or taken to perform them in the future;

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[7] See text for principles, modalities, rules and guidelines pursuant to Articles 6, 12 and 17 (FCCC/SB/2000/3) and submissions by Parties (FCCC/SBSTA/2000/MISC.1).

[8] The information included under this heading is based on the second draft of guidelines for national systems under Article 5.1 (FCCC/SBSTA/2000/INF.5/Add.1).

(b) The provision of the inventory development plan; and

(c) A description of the institutional and procedural arrangements resulting from the implementation of the functions mentioned above.

E. Policies and measures in accordance with Article 2

14. Each Annex I Party shall report information on action taken to work through the International Civil Aviation Organization and International Maritime Organization to limit or reduce emissions from aviation and marine bunker fuels, in accordance with Article 2.2.

(Participants at the workshop did not identify what other supplementary information, if any, should be reported. The experience gained with the use of the revised UNFCCC reporting guidelines could be assessed and options for reporting could then be provided for the COP/MOP.)

F. Compliance

15. Each Annex I Party shall report any relevant information on the development of its domestic compliance measures.

(Parties may wish to provide additional views on this issue.)

G. Information under Article 3.1 and 3.13

(See paragraph 8 above)

IV. LANGUAGE

16. The information reported in accordance with these guidelines shall be submitted in one of the official languages of the United Nations. Annex I Parties are encouraged to submit, where applicable, a translation of this information in English.

V. ADOPTION AND UPDATING OF THE GUIDELINES

17. These guidelines shall be adopted, reviewed and revised, as appropriate, in accordance with decisions of the COP/MOP, taking into account any relevant decisions of the COP.

Annex III

DRAFT GUIDANCE ON METHODOLOGIES FOR ADJUSTMENTS UNDER ARTICLE 5.2

I. OBJECTIVES

1. The objectives of the guidance on methodologies for adjustments under Article 5.2 are:

(a) To ensure the use of adequate methods for adjustments for inventory problems; and

(b) To ensure that adjustments are calculated in an objective, transparent and comprehensible manner.

II. DEFINITION

2. "Adjustments" under Article 5.2 are revised technical estimates of emissions or removals for a particular source category in a greenhouse gas inventory which was submitted by an Annex I Party to meet its commitments under the Kyoto Protocol. "Adjustments" are calculated according to the guidance that follows. "Adjustments" are to be used for the purpose of accounting of Parties' emissions and removals as well as assigned amounts.[9]

III. CHARACTERISTICS

3. Adjustments should be applied only when inventory data submitted by Parties are incomplete and/or are calculated in a way that is not consistent with the Revised 1996 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, referred to below as the IPCC Guidelines, as elaborated by any good practice agreed upon by the Conference of the Parties (COP).

4. Adjustments are not intended as a substitute for national emission estimates to be developed and reported by Parties in accordance with the IPCC Guidelines, as elaborated by any good practice agreed upon by the COP. Adjustments are intended to provide an incentive for Parties to provide annual inventories prepared in accordance with these guidelines, which do not need adjustments.

5. Adjustments should be a last resort and should be applied only when other attempts to correct a problem have failed. Parties should make every effort during the review process under Article 8 to correct identified problems in consultation with the expert review team before an adjustment is considered.

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[9] If a Party corrects a problem identified by the secretariat or expert review team in accordance with the IPCC Guidelines as elaborated by any good practice agreed upon by the COP, this does not constitute an adjustment.

6. Adjustments should be conservative, i.e they should be downward biased when applied to the base year and upward biased when applied to other years (and vice versa for removals by sinks). There should be confidence that adjustments do not overestimate emissions in the base year and do not underestimate emissions in other years.

IV. APPROACH

7. This guidance is intended for use by experts calculating adjustments. When calculating an adjustment, experts should select a method to calculate revised estimates in accordance with the hierarchy provided in section V. They should apply the method in accordance with section VI and ensure the conservativeness of revised estimates and consistency in trends in accordance with the guidance in section VII. Results should be reported in accordance with section VIII.

8. The adjustments should be applied at the level of aggregation at which emission factors are distinct, i.e. at least at the level of summary table 7A of the IPCC Guidelines.

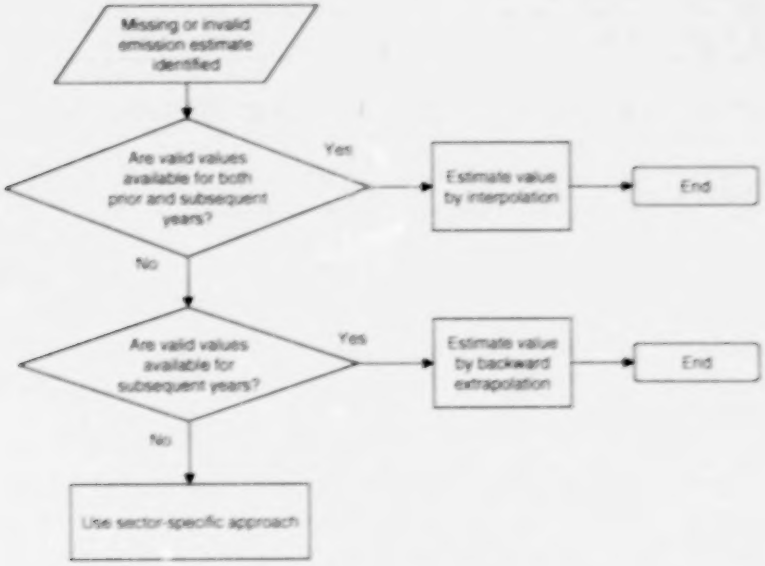
9. This guidance is not comprehensive and does not cover all possible problems. If some aspects of a particular case are not covered by this guidance, the experts calculating the adjustment shall adhere to this guidance and its principles as closely as possible.

V. CHOICE OF METHODS

(This section could include general guidance applicable to all sources, followed by source category specific guidance. It could include a detailed description of which methods should be applied for each source category, greenhouse gas and type of problem. The level of detail of this guidance for source categories could range from a high level of aggregation (five main source categories) to a low level of aggregation (about 30 source subcategories as in summary table 7A of the IPCC Guidelines).

The section could include decision trees and/or tables such as the following two illustrative examples:

Example of general adjustment decision tree applicable to all source categories



Example for ranked options for adjustments according to types of inventory problems for the fuel combustion activities source category. (This table was adapted from the submission of the United States of America, see document FCCC/SBSTA/2000/MISC.1).

Inventory problem	Ranked option for adjustment	Precondition
Reference approach missing	1. Calculate reference approach using energy production data from the International Energy Agency (IEA). The reference approach includes the default emission factors, which are given in table 1-1 of the Reference Manual of the IPCC Guidelines	Comparable energy statistics available from the IEA.
	2. Extrapolate from previous years, possibly using gross domestic product (GDP) provided by [...] as driver.	Reliable estimates from previous years available
	3. ...	
	4. ...	
Emission factor incorrect, misapplied or undocumented	1. Use default emission factor given in table 1-1 of the Reference Manual of the IPCC Guidelines	
Net calorific values incorrect, misapplied or undocumented	1. Use default net calorific values given in table 1-2 of the Reference Manual of the IPCC Guidelines	

Activity data incorrect, misapplied or undocumented	1. Calculate reference approach using energy production data from the IEA and compare to estimate provided by Party and ...	Comparable energy statistics available from the IEA.

VI. METHODS OF CALCULATING REVISED ESTIMATES

(This section could include a description of the methods to be used for calculating an adjustment independent of the source categories, gases and types of problems.

Participants at the workshop suggested that the IPCC tier 1 methods, Annex B averages, extrapolation using drivers, extrapolation without using drivers, interpolation, and estimation based on linkages between emissions of gases or sectors are methods that could be considered (for methods, see also FCCC/TP/2000/1). The outcome of the future technical work may add to, subtract from or modify these methods.

It may be noted that the IPCC good practice report includes a general description of interpolation and extrapolation as well as extrapolation using a driver or growth factor (surrogate method) in the context of recalculations and ensuring consistency of trends.)

VII. OTHER CONSIDERATIONS

A. Making conservative estimates

(This section could include a description of how to ensure that estimates are conservative.)

B. Consistency of time-series

(This section could include guidance on how to ensure the consistency of trends when applying adjustments.)

VIII. REPORTING

(This section could identify information that should be reported. This could include the approach taken to select the method, all assumptions made, the original estimate, the adjusted estimate and the percentage share of emissions from the adjusted source category compared to the total emissions of the inventory.)

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